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# IN-SERVICE EDUCATION AND INNOVATION IN OKLAHOMA PUBLIC SCHOOLS

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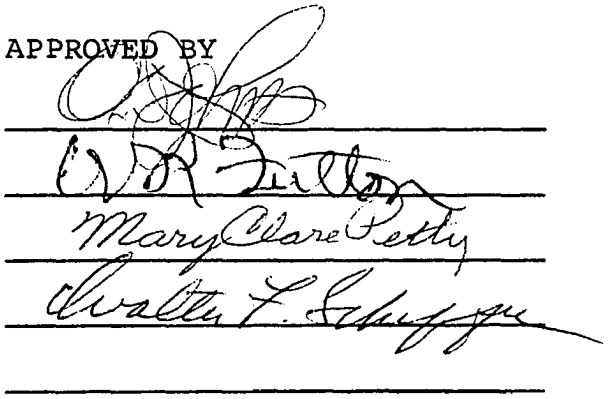

DISSERTATION COMMITTEE

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## CHAPTER I

## INTRODUCTION

Few educators would deny the importance of continuous growth and development of teachers in the competencies required for good teaching. The ability to teach successfully cannot be fully acquired outside of the classroom regardless of the excellence of pre-service training; thus, a continuous program of in-service education must of necessity become a part of the professional life of every teacher.

This study is concerned with the in-service activities of teachers and, in-so-far as they are related to in-service education, the innovative practices carried on by classroom teachers. Chapter I includes the background, need, and purpose of the study, a statement of the problem, the delimitations of the study and definition of terms. Kinds and sources of data are identified and the method of research is described as to type, design and procedure. This chapter closes with an explanation of the organization of the report.

## Background, Need, and Purpose

### Background

The American Association of School Administrators has stated:

> We believe our schools are our one best hope for individual attainment and for national strength and welfare. Without education in ever-growing scope and quality, our nation will fall feeble and the individual will fail of his destiny. Either we disavow faith in free men, free enterprise, and a government of free men or we retain and strengthen our faith in education as the means by which we conceive, attain, and protect them.[1]

The White House Conference in Education wrote, "Schools now affect the welfare of the United States more than ever before in history."[2] Further, this conference stated, "The Schools have become the chief instrument for keeping this nation the fabled land of opportunity."[3]

American education is faced with the unprecedented challenge of preparing the children and youth of our nation to live effectively in a kind of world impossible to predict. A man will need to be retrained four or five times in his lifetime for the work-a-day world in which he will live. In statements such as these there are serious implications for the in-service education of teachers. It is evident from the

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[1]"This We Believe," Joint statement of the American Association of School Administrators and the National School Boards Association, 1963, p. 3.

[2]Ibid. [3]Ibid., p. 4.

literature that in-service programs of today differ in many respects from those of earlier years. Originally it was thought that if an individual had a little knowledge, a few scruples, and the ability to exercise strict control over children, he could be a successful teacher. Surprisingly and unfortunately, some of these ideas still exist. However, as we have seen the vast changes in every aspect of our lives and have become cognizant of the needs of individuals, we have realized that a little knowledge and strict control are not enough. Teachers must continue to improve while carrying on their daily activities. Not only must they grow in their knowledge of subject matter, but, equally important is the need for continued growth in their knowledge of the behavior patterns of children, in their knowledge and use of improved teaching methods and equipment, and in their knowledge of the over all program in education.

Schueler, Director of Teacher Education of Hunter College of the city University of New York, emphasized the need for in-service education programs for teachers in the following statement:

> However sound for its time, if the notion that a pre-service program is essentially all that is needed in preparing for a lifetime of competent teaching service were applied to other professions, few diseased would be cured, no new buildings would be designed, there would be no change in the design of bridges, the law would lose its vitality, industry would stagnate, and transportation would grind to a rust locked standstill. Physicians, engineers, architects, lawyers cannot long function without building into their professional lives a continuing

> program of further training. The same should obviously apply to teachers, for their functioning provides, after all, the foundation upon which all other professions, nay the welfare of society itself is built.[4]

Nelson emphasized the need for change in education when he stated:

> We must agree that our schools exist for the primary purpose of promoting learning of young people, that learning takes place only when change occurs, and that the dynamic process of change cannot be well served by an educational commitment to the status quo as the only requisite to improvement.[5]

Significant change in our schools cannot be accomplished without significant change in teachers. Openshaw stated that, "Changing class size, how children are grouped, courses of study, and supporting materials all seem to make less impact and are of less importance than changing the teacher."[6]

The greatest certainty of this day is change. Many things once thought impossible and unattainable are now commonplace. Among these are radio and television, which

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[4]National Commission on Teacher Education and Professional Standards, The Development of the Career Teacher: Professional Responsibility for Continuing Education, Washington, D. C., Report of an Address Given by Herbert Schueler at a Regional Conference in Boston, 1963, p. 21.

[5]Lester W. Nelson, "Breaking Barriers to Improve Staff Utilization," National Association of Secondary School Principals Bulletin, XLII (April, 1958), p. 329.

[6]National Commission on Teacher Education and Professional Standards, loc. cit., Report of an Address Given by M. Karl Openshaw at a Regional Conference in Chicago, 1963, p. 42.

can be beamed thousands of miles, jet planes which cross the oceans in a few hours, orbital flights, and nuclear fission. We can reasonably expect that the developments of the past fifty years will be greatly overshadowed by those of the next half century. It has been estimated that man's knowledge will increase two thousand times between now and 1999. These factors have important implications for the in-service education of teachers.

A joint statement of the American Association of School Administrators and the National School Boards Association emphasized this thought:

> The professional personnel must be professionally prepared for its diversified, complex tasks, but continuous study, experimentation, and in-service growth are imperative. Encouragement to grow and favorable conditions for growth are the responsibility of the administration and board, but improvement is the responsibility of the individual employee.[7]

Regardless of the adequacy of the preparation of teachers in pre-service institutions, methods and materials are changing so rapidly that teachers who cease to grow are quickly outdated. This fact is dramatically illustrated by the recent developments in mathematics and science. There are vast changes in materials and methods of teaching mathematics, physics, biology, and chemistry. Traditional methods of teaching language arts and social studies are, also rightfully questioned. New methods include team teaching, tele-

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[7] "This We Believe," Joint Statement of the American Association of School Administrators and the National School Boards Association, 1963, p. 3.

vision classes, programmed instruction, and greater use of other technological advances in the classroom. Hodges contends that, "An effective in-service program makes up for inadequacies in pre-service training, strengthens public support through increased understanding, and implements new concepts in the teaching-learning process."[8]

In nature, when growth ceases, deterioration begins. By the same token, when a teacher ceases to grow professionally, it is almost inevitable that professional deterioration sets in. The competent and professionally minded teacher is one who seeks opportunities for continuous professional growth.

Experience sometimes produces professional growth but experience alone is seldom enough. Professional growth comes from many sources. A National Education Association study found that in 1965-66 one-third of the school systems with 6,000 or more pupils required teachers to show evidence of professional growth to earn salary increments at stipulated intervals. In the same year an estimated 94.4 percent of all systems with 300 or more pupils enrolled granted one or more leaves of absence for professional reasons. School administrators were criticized for giving higher priority to schedules, supplies, and irate parents than to activities

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[8]J. B. Hodges, "Continuing Education: How and Why," Educational Leadership, XVII (March, 1960), p. 30.

which would affect more directly the creativity of their teachers.[9]

Although a teacher shortage does not exist at the present time, education is still feeling the effects of the means used to meet the recent shortage as reported in the NEA Research Bulletin in December, 1966.[10] To overcome the shortage many recruits were selected from those who received their education a decade or two ago and many from college graduates in fields other than education. Since many of these teachers still remain in the classroom, time devoted to in-service education for these people should result in an improved instructional program. Improved in-service programs may prevent many failures not only in this group but, also, among beginning teachers. If we subscribe to the premise that a teacher never reaches the point where he is teaching as well as it is possible for him to teach, then a well organized program of in-service education is definitely essential.

Perhaps the most outstanding characteristic of today's educational scene is the spirit of innovation as is evidenced by the extensive professional writing on the subject. The decade beginning in 1957 has been called "The Decade of Inno-

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[9]"Professional Growth of Teachers In Service," NEA Research Bulletin, XLV (March, 1967), pp. 25-27.

[10]"A New Look at Teacher Supply and Demand," NEA Research Bulletin, XLIV (December, 1966), p. 122.

vation and Change in American Education."[11] In a Gallup Poll conducted in October, 1967[12] it was found that not only were teachers, administrators, and board members ready for innovation but that the American public has never been more receptive to change than at the present. The Committee for Economic Development lists as one of the four imperatives for the American public school that it be better organized for innovation and change.[13] There are demands on schools to teach more and to teach it better and faster. These kinds of demands necessitate innovation and change and educational leaders must create the environment in which innovation can flourish.

Beginning with the passage of the National Defense Education Act in 1958 the word innovation came into much more frequent use in educational circles. With the advent of other federal aid to education bills this term became common and educators began to go off in all directions searching for innovative practices. Some of the new ideas, techniques, methods, materials, and equipment were good and some were not. In all probability as many poor practices were

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[11]Berlie J. Fallon ed., Educational Innovation in the United States, (Bloomington, Ind.: Phi Delta Kappa, 1966), p. iv.

[12]The Gallup Polls on Innovation, (Melbourne, Florida: Institute For Development of Educational Activities, Inc., 1968).

[13]Committee For Economic Development, Innovation in Education: New Directions for the American School, A Statement by the Research and Policy Committee (New York: Committee For Economic Development, 1968), p. 9.

developed as good ones.

Great incentive for experimentation and innovation was given by Title I and Title III of the Elementary and Secondary Education Act of 1965. Especially is this true of Title III which had as its primary purpose the initiation and development of innovative practices. Title I, which enabled schools to initiate programs for disadvantaged children, can be said to foster innovation since such programs had not been in existence to any marked degree prior to passage of this bill. Perhaps, Title I actually brought more innovation than Title III since practically all school systems received Title I funds while Title III grants were limited to special projects which usually required hard to realize cooperative action among administrative units.

The importance of the teacher in the innovative process cannot be too strongly emphasized and most efforts to introduce innovations place major emphasis on modifying teacher knowledge, values, and skills. Innovations which bring about changes in size or composition of classes, in subject matter, in teaching methods, in materials and equipment, in the structure of the educational system, in the use of time, and in the use of space all require a certain amount of retraining on the part of the teachers. Hence, in-service education programs for teachers become very important.

## Need

Someone has said that continuing education is a subject about which we, as a profession, have done relatively little systematic, serious thinking. Do we really believe in the necessity of a good program of in-service education for teachers or do we merely give lip service to such an idea? It is likely that if the people employed in the public schools were polled, practically one hundred per cent would say that they recognize the need for an in-service program as an integral part of the over-all educational program. Although practice does not reflect so great a commitment, widespread and increasing interest in the development of adequate in-service programs is being manifested by the education profession.

The in-service education program in American schools has been given top priority in the activities of the Commission on Teacher Education and Professional Standards, better known as the TEPS Commission. This Commission designated continuing education of teachers as the central topic for discussion in its series of regional conferences held throughout the United States in 1963-64. Davies, executive secretary of the Commission, made the following statement at the National Convention of American Association of School Administrators in 1965: "A very tough minded examination of in-service training

programs all across the nation is necessary."[14] He further stated that we should make sure that teachers have the time necessary for participation in programs of in-service education.[15] At the TEPS Commission Conference held in Miami Beach in 1963-64, the conferees were implicit in their agreement that school systems are going to have to take continuing education far more seriously than any of them have in the past.[16]

In interviews with 312 beginning teachers, Hermanowicz, Professor of Education at Illinois State University, found that the majority felt that in-service education programs were highly desirable. However, most of these teachers indicated that such programs were non-existent or severely inadequate as now practiced. In general these beginning teachers found much room for improvement.[17]

The billions of dollars being poured into education

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[14]Don Davies, Executive Secretary of TEPS Commission, Speech Made in a Sectional Meeting at the National Convention of the American Association of School Administrators, Atlantic City, N. J., 1965.

[15]Ibid.

[16]The TEPS Commission, The Development of the Career Teacher: Professional Responsibility For Continuing Education, Report of the 1963-64 Regional TEPS Conferences (Washington, D. C.: National Education Association, 1964), p. 32.

[17]Henry J. Hermanowicz, "The Pluralistic World of Beginning Teachers," The Real World of the Beginning Teacher, Report of the Nineteenth National TEPS Commission Conference, New York, N. Y., 1965. (Washington, D. C.: National Education Association), pp. 19-20.

if not used by innovative educators will simply strengthen and re-affirm aged, outworn practices. The final justification for these vast expenditures is that some child may learn something that he might not have learned or that he might grow in skill or insight. These billions spent must bring about a meeting between the teacher and child on his own level and develop his abilities to their greatest potential. Innovation based on research in the instructional program of our school systems will increase the possibility of reaching these goals.

A study of the in-service activities of teachers which have brought about introduction of innovative practices in the classrooms may serve as a key to the improvement of the programs of in-service education and may serve as a basis for further innovation in the schools. Those in-service activities that have been the source of innovative practices can be stressed in planning the in-service programs and such a study may point up the need for improvement and greater use of practices which have been successful.

## Purpose

The major purpose of this study was to identify those in-service education activities which were the sources of ideas prompting Oklahoma public school teachers to introduce innovative practices in their classrooms, and to interpret the results in ways which may be of value to school systems

in the evaluation and improvement of their in-service education programs.

## The Problem

### Statement of the Problem

The problem may be stated in the form of a question: What were the sources of the ideas and/or what were the educational experiences which caused teachers in the public schools of Oklahoma to introduce innovative teaching-learning practices in their classrooms? In answering this question answers were sought to the following sub-questions:

1. Is there a significant difference in the proportions of teachers in various categories (size of school, sex, grade level taught, years of experience) with respect to the use of innovative practices in their classrooms?

2. What were the innovative practices introduced by teachers in their classrooms during the past two years?

3. In what in-service activities or experiences did teachers participate during the past two years?

4. What in-service activities or experiences stimulated teachers to introduce the identified innovative practices?

### Delimitation of the Problem

This study was limited to classroom teachers in those Oklahoma public school systems containing secondary schools accredited by the North Central Association of Colleges and

Secondary Schools for the school year 1967-68. This study was further limited to classroom teachers with five or more years of experience.

## Definition of Terms

### In-Service Education

For the purposes of this study in-service education was defined as a planned activity or program of activities, either group or individual, which had as its purpose the upgrading of the instructional competencies and skills of teachers.

### Innovative Practices

Innovative practices were defined as those practices which were new to education, practices new to a particular school system, or practices new to an individual teacher. In this study any greater or different use of a previously used teaching-learning practice was considered an innovative practice.

## The Data

Primary data for this study consisted of responses to a questionnaire which was mailed to public school teachers in Oklahoma. The secondary data included materials obtained from the literature, solicitation from the research departments of both the National Education Association and the United States Office of Education, and publications of state departments of education, state education associations, colleges

and universities, and other professional educational organizations.

## The Method of Research

### Type of Research

The type of research used in this study is descriptive. Best makes the following statement concerning descriptive research:

> Descriptive research describes and interprets what is. It is concerned with conditions or relationships that exist; practices that prevail; beliefs, points of view, or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing. The process of descriptive research goes beyond mere gathering and tabulation of data. It involves an element of interpretation of the meaning or significance of what is described. This description is often combined with comparison or contrast, involving measurement, classification, interpretation and evaluation. Although the gathering of data is a necessary step, the research process is not completed until the data are organized and analyzed, and significant conclusions are derived. The conclusions will be based upon comparisons, contrasts, or relationships of one kind or another.[18]

This study was concerned with innovative practices introduced in classrooms and of the sources of ideas or in-service activities which led to their introduction.

### Research Design and Procedure

#### Development of Questionnaire

The questionnaire developed to secure the data necessary for this study (see Appendix II) was divided into two

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[18]John W. Best, Research in Action, (Englewood Cliffs, N. J.: Prentice Hall, Inc., 1959), pp. 102-103.

parts. Part I requested personal data, including sex, grade level taught, years of experience, and educational preparation. Part II contained three sections. In Section One respondents were asked to indicate whether or not they had introduced innovative practices in their classrooms. If the answer was "yes," they were asked to briefly describe or identify the practices and then to complete Sections Two and Three. If the answer was "no," they were asked to complete only the first part of Section Three in which respondents were to check those in-service activities participated in during the last two years from a list of twenty-six activities. The checklist, developed from a careful study and analysis of the literature, was left open at the end for addition of any activities not listed. The checklist mentioned above was also used in the second part of Section Three. In this part respondents were asked to indicate the one primary source of the idea which led to the institution of each innovation listed in Section Two of Part II.

Before distribution to the sample, the questionnaire was submitted to a pilot group to test for clarity and ease of response.

Distribution of the Questionnaire

The population for the study consisted of classroom teachers with more than five years of experience employed in Oklahoma school systems offering instruction in grades one through twelve or kindergarten through twelve and containing

a secondary school accredited by the North Central Association of Colleges and Secondary Schools in 1967-68. According to the Oklahoma Educational Directory there were 17,335 certificated personnel employed in these schools. Included in this total were 5351 teachers with less than 5 years of experience and 1336 administrators, counselors, and supervisors leaving a total of 10,648 teachers from which the sample was drawn. Of the total personnel, 1384 or 13 per cent were employed in schools with less than 50 teachers, 2587 or 24.3 per cent in schools with from 50 to 149 teachers, and 6676 or 62.7 per cent in schools with 150 or more teachers. On the basis of these percentages, questionnaires were sent to 91 teachers in the small school category, 170 in the middle school category and 439 in the large school category.

To secure a random sample, each of the 17,335 professional personnel in the population was assigned a number according to his place on the state personnel report of the employing school. All of these numbers were then put into a hopper and drawn out until the required number of respondents was secured. If a number drawn happened to be some individual other than a classroom teacher or a teacher with less than five years of experience, the name immediately preceding was chosen. If this name in turn did not meet the necessary requirements, then the second immediately preceding name was chosen.

The respondents were further checked to determine whether or not a representative sample of the state was obtained. This was done by dividing the state into four quadrants and determining whether or not a representative percentage of respondents was secured from each section. Table 1, which shows the number and percentage of teachers in each quadrant of the state in the total population and sample, indicated that a satisfactory state-wide sample was obtained.

TABLE 1.--The number and percentage of teachers and the number and percentages of teachers in the sample from each quadrant of the state

| Quadrant | Total Teachers | | Study Sample | |
|---|---|---|---|---|
| | Number | Percentage | Number | Percentage |
| NW | 2215 | 20.8 | 145 | 20.7 |
| SW | 3120 | 29.3 | 199 | 28.5 |
| NE | 4174 | 39.2 | 274 | 39.1 |
| SE | 1139 | 10.7 | 82 | 11.7 |
| | 10648 | 100.0 | 700 | 100.0 |

After the initial mailing and one subsequent plea for returns in the fall of 1968, 341 questionnaires or 48.7 per cent were returned. On a following mailing in which all people who had not responded were sent another questionnaire, an additional 50 returns were received to bring the total to 391 or 56 per cent.

The number and percentage of responses by size of schools is shown in Table 2. When comparing the number of returns in each group with the number of questionnaires mailed to that group, it was noted that the teachers in the small size schools led with 63.7 per cent returns. Next was the group with 150 or more staff members with 56.7 per cent returns and the lowest was the group with 50 to 149 teachers with an even 50.0 per cent.

TABLE 2.--The number and percentage of questionnaires mailed and returned according to size of school as measured by the number of teachers employed

| Size of Schools | Questionnaires Mailed | | Questionnaires Returned | | |
|---|---|---|---|---|---|
| | Number | Per cent of Total (700) | Number | Per cent of Total Returns (391) | Per cent of Question-naires Mailed |
| Below 50 Teachers | 91 | 13.0 | 58 | 14.8 | 63.7 |
| 50 - 149 Teachers | 170 | 24.3 | 84 | 21.5 | 50.0 |
| 150 or more Teachers | 439 | 62.7 | 249 | 63.7 | 56.7 |
| Total | 700 | 100.0 | 391 | 100.0 | 56.0 |

On the other hand, if the comparison is made by using the returns in each group as a percentage of the total returns, it was found that 14.8 per cent of the respondents came from

the small school group while 13.0 per cent of the sample was in this category; 21.5 per cent came from the middle sized group, with 24.3 per cent of the sample being from this group; and 63.7 per cent came from the large school group with 62.7 per cent of the sample coming from this group.

Table 3 shows the distribution of respondents according to the characteristics of grade level taught, sex, years of experience, and degree preparation. Of the 391 respondents 190 or 48.6 per cent were elementary teachers and 201 or 51.4 per cent secondary; 98 or 25.1 per cent were male and 293 or 74.9 per cent female; 97 or 24.8 per cent had from 5 to 10 years of experience, 77 or 19.7 per cent from 11 to 15 years, and 217 or 55.5 per cent above 15 years; and 174 or 44.5 per cent held bachelor's degrees and 217 or 55.5 per cent master's degrees.

TABLE 3.--Distribution of respondents according to grade level taught, sex, years of experience, and levels of preparation

| | Grade Level | | Sex | | Years of Experience | | | Levels of Preparation | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Elem. | Sec. | Male | Female | 5-10 | 11-15 | Above 15 | Bachelors | Masters | Total |
| Number | 190 | 201 | 98 | 293 | 97 | 77 | 217 | 174 | 217 | 391 |
| Per Cent of Total | 48.6 | 51.4 | 25.1 | 74.9 | 24.8 | 19.7 | 55.5 | 44.5 | 55.5 | 100.0 |

Treatment of the Data

The secondary data obtained from the literature, materials from the research departments of the National Education Association and the United States Office of Education, and publications of state departments of education, state education associations, colleges and universities, and professional educational organizations were carefully reviewed and analyzed. The findings from this review and analysis served as a basis for the development of the questionnaire used in the study and in writing the following parts of the report: (1) Background of the study, (2) Need and purpose of the study, and (3) Chapter II of the study which contains a review of the literature in the fields of innovation and in-service education of teachers.

The primary data consisted of questionnaire responses from 391 teachers. The data obtained from the questionnaires are presented in a series of percentage tables based on the size of schools, years of experience, educational background, teaching level, and sex of the respondents. The data were tested using the Z test for comparison of proportions from unequal populations. The null hypothesis tested was that there were no differences in the proportions of the various categories of respondents who reported innovations.

Tabulations were made of both in-service activities participated in during the last two years by the respondents and the in-service activities which prompted respondents to

introduce innovative practices in their classrooms. These tabulations were put into tabular form for ease in reporting activities in which there had been more extensive participation and activities which had been the major sources of innovative practices.

## Organization of the Report

Chapter I is concerned with the background, need, and purposes of the study; a statement of the problem including questions to be answered, delimitation of the study, and a definition of terms; description of the data; an explanation of the method of research including the type of research, the development and distribution of the questionnaire, and a review of the sample and returns; the procedures used in treatment of the data; and the organization of the report.

Chapter II consists of a review of the literature in the areas of innovative practices and in-service education. Included are descriptions of selected practices and activities in both areas.

Chapter III presents comparisons of categories of respondents who have introduced innovative practices in their classrooms. Included in this chapter is a report of the innovative practices reported by the respondents.

Chapter IV contains a survey of in-service education activities in which teachers have participated and those in-service activities which have been the source of innovations

introduced to Oklahoma classrooms.

The final chapter of the study is a summary of findings together with conclusions and recommendations.

# CHAPTER II

## REVIEW OF THE LITERATURE

This chapter reviews the literature in the fields of educational innovation and in-service education of teachers and describes selected innovative practices and in-service programs.

Perhaps the single most discussed topic in current educational publications is that of innovation. The word "innovation" first appeared in the Educational Index in 1964, and the literature will be reviewed from this date. This is not to infer that innovative practices in education did not occur prior to 1964, only that there was comparatively little writing on the topic prior to that date.

The fact that writing on in-service education is much more extensive in recent times than in earlier years suggests increased feeling on the part of educators of the need for improved in-service programs. However, since the characteristics of good in-service education programs do not differ appreciably today from times past, in this review some references will be made to literature prior to 1964.

## Innovative Practices in Education

A leading industrialist said a short while ago, "Our national survival both as a country and as a viable economic society will necessitate a closer tuning of the educational effort to the changing needs of the country."[1] To meet this challenge it is mandatory that considerable change take place in the educational program of the schools and the one way to bring this about is through the introduction of innovative practices. Most educators believe that innovation is essential if schools are to be genuinely effective in achieving their purposes and goals.

The time is ripe for innovation. There is a great clamor and cry for innovative practices in schools from the general public, from board members, and from educators. However, there is still a certain degree of resistance to change. In 1966 a United States Congressional subcommittee, after conducting hearings on automation and technology in education stated:

> Less than one per cent of the annual outlay of the educational industry of this country is devoted to research and development. An innovation in medicine takes about two years to be adopted universally. An innovation in education has been estimated to take thirty years before widespread adoption, and ten to fifteen years for even the first three per cent of

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[1]Lois V. Edinger, "Teaching in an Age of Discovery," Wisconsin Journal of Education, XCVIII (March, 1966), p. 16.

the schools to make significant changes.[2]

There are some factors that appear to limit acceptance of innovative practices. These have been summarized by Purdy, Project Director of the Great Plains School District Organizational Project in Lincoln, Nebraska, as follows:

1. Failure to establish effective communication (within the staff; within the leadership; with the public).
2. Internal staff conflict and resistance.
3. Lack of risk money (tight budgets).
4. Lack of clear definition or understanding of what is proposed.
5. Absence of research in designing and planning the program of an innovational concept.
6. Limited evaluation, although informal evaluation was clearly in evidence.
7. Legal obstructions.
8. Excessive demands on the time and energy of a leader.[3]

On the other hand, Moore and Heard suggest that there should be some resistance to innovation. They list the following as legitimate reasons for resisting particular, specific suggestions to innovate:

1. When the proposed innovation, however attractive is unalterably out of phase with existing sequences.
2. When the proposed innovation takes the school system past the "point of no return" (PNR) without assurances that the new conditions beyond PNR will be better than the old.

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[2]G. Ernest Anderson Jr., "Estimated Time for Accepting Educational Ideas: 30 Years," Nation's Schools, LXXVIII (December, 1966), p. 50.

[3]Ralph D. Purdy, "The Public--and Innovation," Educational Leadership, XXV (January, 1968), p. 298.

3. When the attractiveness of a proposed innovation is a function of an attractive but dissimilar environment.
4. When the economic consequence to existing programs is out of proportion to the potential good to be derived from the proposed change.
5. When the success of a proposed innovation is dependent upon specialized personnel resources unavailable to the potential adopter.
6. When potential physical, psychological, or academic dangers of great magnitude cannot be tested under controlled conditions.
7. When the proposed innovation will preclude or prolong a better conceived and more permanent solution to the problem under consideration.[4]

Grieder states that, "Even though most educators indicate a receptiveness to innovation, there are quite a few practices we just don't want to monkey with."[5] Grieder lists the following examples:

> Boarding schools are practically anathema, although sparsely settled areas could well make use of them in lieu of daily transportation.
>
> Americans are so committed to coeducation that they won't even discuss the possible advantages of separate schools for boys and girls. A rather strong case can be made for them particularly at the junior high school level.
>
> Open enrollment whereby individual schools could enroll students from any part of town, up to a school's capacity, is scarcely considered as an alternative to attendance districts. While open enrollments would in many places assist in desegregating schools, there are also other advantages which are overlooked.

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[4]Samuel A. Moore II and James E. Heard, "Resistance to Change: A Positive View," Phi Delta Kappan, L (October, 1968), p. 117-18.

[5]Calvin Grieder, "Attention Innovators: Don't Ignore the Promising Areas," Nation's Schools, LXXIX (March, 1967), p. 8.

> Research reports show that reading can be taught with high success in kindergarten, and that pupils benefit from it for at least five years.
>
> Flexible or modular scheduling is only slowly spreading, despite its obvious advantages. In a similar vein the ungraded elementary school should be more widely tried out.[6]

Wise educators will not blindly accept innovative practices but will insist on testing them for soundness before making them a part of the educational program. The following guidelines for testing the soundness of innovation have been proposed by Heywood:

1. There must be a valid reason for the innovation.
2. Establish hypotheses. Ask critical questions. Does the change harmonize with the philosophy of the district? Are resources available to carry out the innovation? Do the people committed to the change have the necessary abilities to carry it out? What research is there on the subject? Can it be evaluated?
3. Prepare for the syndromes that accompany innovation--the publicity, work pattern, precision, psychological, and balance syndromes. Publicity should not become more important than the innovation. A staff member skilled in public relations should be given the responsibility of grouping the values and problems created by publicity. Innovation means more work for the participants. How much are regular responsibilities being neglected? Do participants have a realistic idea of the time required for innovation? Are participants released from other duties? Does the time required justify the results? If an innovation has a fair chance of execution and of being effective, teachers must be involved who are mature enough to understand the difference in viewing a problem and viewing themselves as individuals in the problem. If this psychological syndrome is not provided for, the

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[6] Ibid.

people who are trying the innovation--not the innovation--will be evaluated.
4. Evaluation procedures must be planned.[7]

Heywood listed the following guidelines for evaluation of innovative practices:

1. Evaluate the content of the innovation by comparing current practices with previous content.
2. Evaluate the morale of the faculty members involved in the innovation. Higher morale means higher production.
3. Evaluate students' morale. If students are not involved in the innovation, it is not likely to be effective in changing their thoughts, actions, and feelings.
4. Evaluate comparative data preferably with a pre-test and a post-test to determine rate of learning and comprehension in relation to resources expended.
5. To guard against subjectivity of evaluation, have outsiders evaluate the effectiveness of the innovation.
6. Evaluate the acceptance of the innovation by the enlightened public.[8]

Most people, educators included, attribute the slowness of the acceptance of innovation in education to an entrenched resistance to change by educational practioners. Carmichael, in a guest editorial in The School Administrator, indicated that "The slow progress in effecting innovation results from educational inertia created by experiences with inappropriate and inadequate approaches to change."[9] He

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[7]Stanley J. Heywood, "Toward a Sound Theory of Innovation," Educational Digest, XXXI (February, 1966), pp. 9-12.

[8]Ibid, p. 12.

[9]Benjamin E. Carmichael, "Some Thoughts on Educational Change," The School Administrator, (August, 1969), p. 2.

states further:

1. Most proposed educational innovation relies upon individual classroom teacher performance for implementation.
2. Too many new educational practices are of the add-on variety, requiring immediate, large increases in expenditures for implementation.
3. A preponderance of educational innovations consists of inventions of change and do not give sufficient consideration to locus of change; one should not select a BB gun for a bear hunt.
4. The "grass roots" approach to educational innovation--teacher-by-teacher, school-to-school, district-to-district--is obsolete and should be abandoned.[10]

One of the chief barriers to innovation is fear. Teachers are afraid to try anything new because they are afraid of failure. Pennock says that he would encourage his teachers to try innovative practices despite the possibilities of failure because most of the things we have were failures once, until somebody improved them.[11]

It seems to be the general concensus that there is a direct relationship between financial ability and innovation and that most small school districts lack the financial resources to initiate innovative practices. The first stage of a long-range effort to alleviate the situation and enable small, rural schools to take advantage of promising new educational practices has been set as a result of a $100,000 United States Office of Education grant to the Colorado

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[10] Ibid.

[11] Laurel M. Pennock, "If I Had It to Do Over Again," Education Age, V (March-April, 1969), p. 5.

Department of Education. The project, called SPREAD (State Programs Revitalizing Education and Diffusion), is intended to improve learning in small schools by helping them through their state education agencies to adopt successful innovations more rapidly. It is hoped that the program will be ready for operation throughout the Nation by 1972.[12]

Heinrich lists four innovative practices that can be instituted in any school regardless of size or financial ability, and suggests that all that is needed is planning and effort on the part of the staff:

1. Don't talk so much. Teachers and administrators talk to and at students entirely too much.
2. Let students talk more. This can be done in small discussion groups not in classes of thirty. Split up these classes, let students learn to be discussion leaders, recorders, and observers as well as discussants. The old question and answer recitation should be thrown in the wastebasket.
3. Let them study by themselves. From prekindergarten on through high school and college, students should be learning independently.
4. Get rid of the grade or mark covering many things, the A or D that covers achievement, attitude, behavior, attendance, etc. Abandon the practice of comparing individual members of a class with one another, including grading on a curve and ranking of students. Give written tests in specific subjects, with a different result, obviously, for each subject. Use your own notations and observations, for whatever they are worth. Use sociometric techniques of measuring children's reactions to one another. Sit down and talk with parents

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[12]"Innovations and Rural Schools," Hot Line, II (October, 1969).

and with children.[13]

The steps necessary for the installation of innovative practices have been summarized by Rubin, Director of the Center for Coordinated Education at the University of California:

1. The staff must understand the innovation, its requirements, and its relation to the school's objectives.
2. The benefits of the innovation must be made clear.
3. Specific strategies must be used to induce the staff to accept the innovation.
4. A "getting ready" program must be provided.
5. The innovation must be introduced.
6. Various kinds of support must be provided in order to prevent premature or transitional failure.
7. The innovation must be tied to the overall program.[14]

A report entitled Educational Change: The Reality and the Promise[15] is highly recommended for reading by educators planning the establishment of innovative practices in their schools. This publication is a report on the National Seminars on Innovation held in Honolulu, July 2-23, 1967. These seminars were sponsored by the Institute for the Development of Educational Activities (I/D/E/A/), a division of

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[13]June Sark Heinrich, Innovation in Education: Some Examples, Unit Seven, Science Research Associates Teacher Education Extension Service,(Chicago: Science Research Associates, 1967), p. 33.

[14]Louis J. Rubin, "Installing an Innovation," Educational Change: The Reality and the Promise, ed. Richard R. Goulet (New York: Citation Press, 1968), p. 162.

[15]Richard R. Goulet (ed.), Educational Change: The Reality and the Promise, (New York: Citation Press. 1968).

the Charles F. Kettering Foundation of Dayton, Ohio in cooperation with the United States Office of Education.

The whole concept of the /I/D/E/A/ Corporation is perhaps the most innovative in American education today. Its purpose is to develop and test innovative ideas and to work actively for their widespread acceptance in schools across the country. Teachers have a special interest in the programs of /I/D/E/A/ because it is developing practices at the classroom level. New concepts for educational improvement are considered by the /I/D/E/A/ staff and those that seem to have value are then tested under the supervision of Dr. John I. Goodlad at the University of California at Los Angeles Practice School. Dr. Goodlad, director of the University Elementary School, serves as Director of Research and Development for /I/D/E/A/. Innovations that survive the test by Dr. Goodlad are referred to a school in the League of Reporting schools and those reported out of the League are introduced in demonstration schools throughout the country.[16] To abate the apprehensions that many school administrators feel about attempting innovation, the Research and development Division of /I/D/E/A/ has attempted to design a comprehensive evaluation system which will make it possible to measure the impact of an innovative practice in the

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[16]"Innovation Explosion," Instructor, LXXVI (October, 1966), p. 148.

elementary school.[17]

The Research and Policy Committee of the Committee for Economic Development has listed as one of the four imperatives of education the establishment of a National Commission on Research, Innovation, and Evaluation in Education.[18] Such a commission would be responsible for practically the same services as those rendered by /I/D/E/A/.

The key person in the innovative process is the classroom teacher. In many instances the administrator can initiate change, but innovative practices cannot be instituted or be very successful without the cooperation of the teacher. Mackenzie gives three approaches to involving teachers in the innovative process:

1. The first approach places major emphasis on modifying teacher knowledge, values, and skills through in-service education programs.
2. A second approach is to employ teachers with new competencies such as foreign language teachers in elementary schools.
3. A third approach is to organize or deploy teachers in a different way. Such deployment may include team teaching or the use of teacher and clerical aides to free teachers for teaching.[19]

Since classroom teachers are the only people in the

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[17]"Research and Development," /I/D/E/A/ Reporter, (Fall Quarter, 1968), p. 1.

[18]Committee For Economic Development, Innovation in Education: New Directions for the American School, A Statement by the Research and Policy Committee (New York: Committee For Economic Development, 1968), p. 9.

[19]Gordon N. Mackenzie, "The Process of Innovation," NEA Journal, LVI (May, 1967), pp. 28-29.

educational community who have direct daily contact with students at the level of thinking and learning, it would be a mistake if they were not involved in the evaluation of the flood of innovative ideas. They must be included in determining what innovations in curriculum and teaching practices should be accepted or rejected.[20] To foster teacher-initiated classroom innovation the New Jersey State Legislature has appropriated money to finance such ventures. Any teacher is free to apply for a mini-grant to help him carry out an innovative project. During the 1968-69 school year 108 projects were approved out of 400 applications. Most of the mini-grants approached the $1,000 maximum. Some of the proposals have been retained as permanent features in the districts where they were tried.[21]

Griffin suggests that teachers, in their evaluation of innovative practices in education, should ask these questions:

1. Is the innovation appropriate for the learner?
2. Is the innovation economical of time, space, and human resources?
3. Is the innovation consistent with the goals of the school system?
4. Is the innovation aligned with the philosophical position of the society and the schools?

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[20]Bernard Z. Friedlander, "Todays Innovations in Teaching," NEA Journal, LV (March, 1966), p. 10

[21]"State Innovation Funds," Phi Delta Kappan, LI (October, 1969), p. 112.

5. Is the innovation firmly rooted in sound educational theory?[22]

In 1966 Phi Delta Kappa published a collection of innovative practices entitled, Educational Innovation In the United States.[23] This collection contained 628 practices introduced in 323 school systems throughout the United States. Of the 628 practices reported, 123 were in the field of administration and supervision, 169 were in elementary education, 202 were in secondary education, and 134 pertained to all level programs in grades 1-12.

Many adaptable innovative programs are contained in Volume I through Volume V of the Successful Ventures In Contemporary Education in Oklahoma.[24] In addition to these volumes a section of The Oklahoma Teacher is devoted to "Successful Ventures In Oklahoma Schools."

In 1967 the Southwestern Cooperative Educational Laboratory, Incorporated, and the Oklahoma Curriculum Improvement Commission collaborated to compile a Catalog of Educational

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[22]Gary A. Griffin, "The Teacher Evaluated Innovations," NEA Journal, LVI (December, 1967), pp. 26-28.

[23]Berlie J. Fallon (ed.), Educational Innovation in the United States, (Bloomington, Indiana: Phi Delta Kappa, Incorporated, 1966).

[24]Oklahoma State Department of Education, Successful Ventures in Contemporary Education in Oklahoma, Vol. I-V, Compiled by the Oklahoma Curriculum Improvement Commission (Oklahoma City: Oklahoma State Department of Education, 1965-69).

Innovations In the Oklahoma Public Schools.[25] This work, published by the Oklahoma State Department of Education, contains 144 innovative practices introduced in 73 Oklahoma school systems and three county cooperative programs. Included are 14 practices in administration and public relations, six in-service education and materials centers, six in guidance and counseling, 52 in instructional areas, six in library use, 17 in special education and student grouping, and 13 miscellaneous practices.

In 1965 Congress passed the Elementary and Secondary Education Act which gave great impetus to the search for and the inauguration of promising innovative practices in American education. Seventeen Projects: Federal Funding for Education--1966 A Beginning[26] is a description of 17 programs funded under Title I of the act. Title I funds were to be used to improve the opportunities for the educationally disadvantaged and as a result some of the programs described in the publication represent improvement and expansion of already existing programs. However, all of the projects contain innovative practices and some are new programs.

Title III of the ESEA is the "innovative title" since

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[25]Oklahoma State Department of Education, Catalog of Educational Innovations in the Oklahoma Public Schools, Prepared by the Southwestern Cooperative Educational Laboratory, Inc., and the Oklahoma Curriculum Improvement Commission, (Oklahoma City: Oklahoma State Department of Education, 1967).

[26]Seventeen Projects: Federal Funding for Education--1966 A Beginning, (Washington, D. C.: Educational Developmental Laboratories, Inc., 1967).

one of its requirements is that programs must be innovative if they were to be funded. Staff members of the United Stated Office of Education visited many Title III programs throughout the country. As a result of these visits, 62 innovative programs were listed and described in Stepping Up With Pace.[27]

"Innovation can prove in the long run a bane or a boon. What the teacher does with it will make the difference."[28]

## Innovative Practices In Selected School Systems

Because of the overlapping of practices and the great volume of literature, only selected programs will be described in this study. Some of the practices will be identified by location and some by descriptive title.

### Redwood, California

The belief became prevalent in the Redwood, California schools that teenagers should be aware of the basic principles of law and the effects of a criminal record on their activities in later life. In view of this, the city schools inaugurated a pilot program in the seventh and eighth grades to stress individual procedural rights and responsibilities

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[27] U. S. Department of Health, Education, and Welfare/ Office of Education, Stepping Up With Pace, (Washington, D. C: U. S. Government Printing Office, 1967).

[28] "Innovation Explosion," Instructor, LXXVI (October, 1966), p. 184.

under the law. The students studied the possible consequences of such unlawful behavior as party crashing, threatening someone, stealing, draft card burning, and littering property.[29]

Toronto, Canada

For a number of years the Toronto, Canada Board of Education has been operating a service which allows teachers to phone the Board's central library for a thorough search for information required by themselves or their students. The professional writers in the documentation section of the library prepare reports on educational topics and issues, reviews of professional literature and tables of contents of many periodicals from which complete articles may be ordered. The information to students now reaches most of the secondary school population and is gradually moving into the elementary schools.[30]

Evanston, Illinois

In 1967, the administration of the Evanston, Illinois School System set out to make an old, formerly black school for grades K through five a place so rich in its learning environment that all students would clamor to attend. The

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[29]"Kids Should Know the Law," Phi Delta Kappan, LI (October, 1969), p. 84.

[30]L. H. Freiser, "Let's Close the Factory," Educational Leadership, XXIV (May, 1967), p. 741.

revitalization of the school was started by turning four classrooms into mini-labs. Each mini-lab was filled with materials and equipment related to a particular subject area: mathematics, social studies, science, and language arts. When they had free time, students were allowed to go to the lab of their choice to pursue an independent project or to listen and watch a program relating to their favorite subject. The students ran the equipment themselves. Each classroom in the school had an overhead projector and screen; slide and film projectors; a language master; and a receiver for closed circuit television. In addition most rooms had record players, tape recorders, and filmstrip viewers. All equipment and materials in the classrooms or mini-labs could be checked out and taken home by the children.[31]

Duncan, Oklahoma

The Duncan, Oklahoma School District, faced with the possibility of having to eliminate physical education in the junior high school because of overcrowded facilities, instituted what may be the first co-educational physical education class in Oklahoma. The program, a combination sports-recreation course, was varied from one nine-week period to the next with major emphasis on recreational activities that may be extended into adult life.[32]

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[31] "The Saturated Environment," School Management, XIII (October, 1969), pp. 56-58.

[32] "Duncan PE Goes Coed," Oklahoma State Superintendent's Newsletter, X (October, 1969), p. 68.

Hempstead, New York

The Hempstead, New York schools have initiated a plan to regenerate hope, a purposeful life, and at the same time improve the physical environment of the disadvantaged areas of the community. The program identified a subcommunity as the working unit in helping every child realize a sense of security. A typical subcommunity would include approximately 30 apartments containing 90 families with 180 children of all age groups. The school age children would be divided into groups of 10 with each group assigned to 3 adults responsible for setting up an educational program. The program would be coordinated with and under the direction of the Hempstead School District. The adult leaders would be people capable of caring for the unmet needs of the children lacking sufficient parental care and direction. The plans, also, called for the remodeling of 18 apartments to serve as Living Room Schools for the day and converting to living space as needed.[33]

Mazomania, Wisconsin

In Mazomania, Wisconsin "Composition: The Essay," is a one semester independent study course developed for juniors and seniors at Western High School. This course contained twelve packages which students worked through at their

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[33]Donald L. Davis and John A. Shaver, "New Ideas In Urban Education," Nation's Schools, LXXXIII (March, 1969), p. 68.

own rate. Each package contained readings from a text, filmstrips, tapes, transparencies, a pre and post test, and a writing assignment with opportunities to pursue problems in depth. Each individual was required to satisfactorily complete each package before beginning the next one. At the request of the students, provision for an occasional seminar was included in the course. The seminars were held as the need arose among students working on a common problem.[34]

Abington, Pennsylvania

Recently the Abington, Pennsylvania High School, North Campus, began using video tape demonstration lessons to teach ninth and tenth grade students the basic essentials of Typing I and Typing II. The taped lessons, prepared and demonstrated by the business department chairman, allowed the teacher to circulate through the class aiding individuals without interrupting the rest of the students.[35]

Connecticut

Connecticut's answer to the problem of offering specialized instruction in auto repair in the states fourteen vocational-technical schools was an auto repair shop on wheels. The program goal was to train 100 entry and 400 refresher students

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[34]"English Composition: Continuous Progress Basis," /I/D/E/A/ Reporter, (Spring Quarter, 1968), p. 1.

[35]"Teaching Typing Via Video Tape," /I/D/E/A/ Reporter, (Spring Quarter, 1968), p. 4.

each year. The shop, contained in a van pulled from school to school by a truck, contained all equipment needed for teaching motor tune-up work. Power for lights, heat, air-conditioning and machinery operation was supplied by a generator located in the rear of the truck.[36]

Ottawa, Ontario

The Ottawa, Ontario Public Schools, in an effort to bridge the gap between the city child's environment and the world of nature, organized the MacSkimming Outdoor Natural Science School. The school, consisting of 200 acres, covered a wide variety of habitats as well as major soil types, evergreen and decidous trees, and a sugar bush. Two specially trained teachers working with the visiting teacher handled one class a day, carrying out carefully planned lessons in groups of ten pupils per teacher. Activities at the school included working bees; setting traps for small animals, birds, or fish which were tagged and released; and collecting data on the number and type of species found in a certain area and comparing the information with the findings of another class.[37]

Toronto, Canada

Toronto, Canada school officials, after a two year

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[36]"State Buses Auto Shop to Students," Nation's Schools, LXXXIII (February, 1969), p. 127.

[37]"Outdoor School Brings Urban Youth Back to Nature," Nation's Schools, LXXXIII (February, 1969), p. 73.

study of building problems and future educational needs, asked industry to bid on various systems or components for all of the thirty-one schools and office buildings planned for construction during the next few years. For example, one successful bidder would supply all exterior walls, another all heating and air-conditioning, and a third all ceiling and lights. There were ten systems in all that would be submitted for bids. The results were innovative building plans emphasizing flexibility that would adapt to future educational needs.[38]

Tucson, Arizona

The Board of Education in the Tucson, Arizona School System established innovative practices in many areas of the Lulu Walker Elementary School. The scheduling in the Walker School was completely flexible with each child and teacher having a different schedule each day. The daily schedule was based on the previous days activities and successes. It included both small and large group activities and independent study or individualized work. The teachers' scheduling was a flexible form of team teaching. The teacher chose the students and subjects he wished to meet on the following day and the length of time needed. A schedule clerk then put these on a space and time schedule for the next day. Other

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[38]"Need For Space Will Not Wait," The Enid Morning News, October 31, 1969, p. 20.

innovative practices included the "4T" program (teacher-to-talk-to), a student council, and a one week program of outdoor education activities.[39]

The school plant was also innovative. It included large open learning spaces, completely flexible furniture, and sinks and drinking fountains in each classroom area. The resource center was complete with all equipment and materials, reading rooms, teacher work stations and teacher aide work areas. The area for science activities was completely free of inner walls but had booths for additional student projects. Also, included in the school plant was a multi-purpose building housing an indoor theater, a demonstration area, and a cafeteria and kitchen. Completing the plant was a grass-tiered amphitheater.[40]

Lake Villa, Illinois

The Lake Villa, Illinois School constructed an auditorium with the ultimate in flexibility. The entire arrangement of the auditorium could be changed by pushing a button. The facility included two rotating classrooms oriented toward science instruction, a stage platform that could be completely recessed, and a full-size projection room which was separated from the gymnasium by a folding partition.[41]

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[39]Evelyn Carswell, "Walker School's Interpretation of Educational Change," Educational Leadership, XXIV (April, 1967) pp. 642-47.

[40]Ibid.

[41]"Push-Button Auditorium Has Revolving Seats," Nation's Schools, LXXIV (July, 1969), p. 54.

Nassau County, New York

In Nassau County, New York the public schools planned a "safety town" to teach principles of safety to children from kindergarten through third grade. The project included thirteen buildings that were one-third normal size, a standard-size town hall for lectures, macadam roadways and divided highways, an overpass, a cloverleaf, a railroad crossing, traffic lights, one way streets, stop signs, yield signs, warning signs, parking signs, policemen, bicycles, and miniature battery-operated automobiles. The program was designed for a child to spend three hours in the miniature village; one hour as a pedestrian, one hour as a bicycle rider and one hour as the operator of one of the miniature automobiles. In each of the three activities a child was in a group of ten children under the direction of one policeman.[42]

Portland, Oregon

In the Portland, Oregon School System a program called Student Team Action has been developed. This program involved upper grade students as tutors in a one-to-one relationship with primary students. Every upper grade student, regardless of his own achievement or behavior, taught. The students determined the subject matter to be covered and the teachers

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[42]"Nassau County's Safety Town," Phi Delta Kappan, LI (November, 1969), p. 177.

determined the time and number of meetings per week.[43]

Hamilton, Massachusetts

In 1968 the senior students and teachers of Hamilton-Wenham Regional High School in Hamilton, Massachusetts cooperated in a project called "Mini-Courses." The proposed project was an attempt to combat apathy in the student courses for a two week period and to study in depth any topic in which students had particular interest. The courses were selected entirely by the students with teachers acting as guides during the class sessions.[44]

## Other Selected Innovative Practices

The literature describing innovative practices in American Education today is substantial. There are many instances of overlapping in the descriptions which follow since some practices which have proven successful in one school have been modified and have become successful in others, and have been reported in different publications. Some of these practices are: team teaching; independent study; early childhood education; non-graded programs, use of paraprofessionals; flexibility in space and time; material centers; programmed instruction; compensatory educational programs; mini-courses; micro-teaching; computer assisted

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[43]J. Carl Fleming, "Pupil Tutors and Tutees Learn Together," Today's Education, LVIII (October, 1969), pp. 22-24.

[44]Robert A. Hayward, "Maximum Results From Mini-Courses," Today's Education, LVIII (September, 1969), pp 55-57.

instruction; talking typewriters; and simulation games.

Modular Scheduling, Team Teaching, Independent Study

Basically, modular scheduling divides the school day into equal units of time which are considerably shorter than the traditional class period. These shorter units of time, called modules, are combined in various ways to meet the needs of teachers and students. Each student arranges his own time schedule under this flexible arrangement. Teachers decide how much time is required to complete a certain learning activity and time units are set up accordingly. The most common module seems to be twenty minutes. There are three additional innovative practices used in most modular schedules: (1) Team Teaching which involves large group meetings; (2) Small group instruction which occurs two or three times per week; and (3) Independent study. During the independent study time a student may spend his time in the library, a science laboratory, an art room, a physical education facility, or schedule time for individual conferences with teachers.[45]

Auxiliary Personnel

Whether they are called teacher aides, auxiliary personnel, or paraprofessionals, the use of these people is perhaps the most common new practice to be found in American Education today. This suggests agreement among educators

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[45]Arnold J. Moore, "An Approach to Flexibility," Educational Leadership, XXIV (May, 1967), p. 63.

that one of the greatest needs in education is to free teachers from the myriad of custodial and monitorial chores so that they can devote more time to instruction.

There are many methods of recruitment and many different qualifications for the employment of teacher aides in the schools across the country. While some schools have developed standards for the employment, training, and use of these people, other schools tend to face and solve each new problem as it arises. Duties performed by teacher aides have been categorized as: (1) Clerical, (2) Housekeeping, (3) Instructional support, (4) Technological, (5) Monitorial and (6) General. In some school systems the teacher aide program is composed of volunteers while in others the aides are employed on an hourly wage basis. In most schools teacher aides are shared by teachers, but in a few there is an aide for each teacher.[46]

Continuous Progress Programs

One method of allowing students to master concepts at their own rate of speed is through the use of continuous progress materials. /I/D/E/A/ has developed a model for teachers to use as a guide in preparing such materials. The model materials, entitled UNIPAC, are divided into sets, each covering only one concept. The student is expected to master each concept before he progresses to the next. It may take the

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[46]Frank C. Emmerling and Kanawha Z. Chavis, "The Teacher Aide," Educational Leadership, XXIV (November, 1966), p. 177.

student two days or two weeks to complete a set of materials but in this way students are not locked into a classroom situation designed to accomodate the average learner. The Innovative Programs Division of /I/D/E/A/ has conducted many in-service programs to aid teachers in developing continuous progress materials.[47]

Individually Prescribed Instruction

Another innovation which allows students to progress at their own rate is called individually prescribed instruction (IPI). This method is individualized instruction on a systematic, step-by-step basis throughout the entire educational program. The IPI program works toward organizing instruction so that each student's work can be evaluated daily and guided by a teacher written prescription. The prescription is a plan for the student to improve and master a particular skill or objective. IPI involves a vast amount of paper work and extensive information about a child's academic achievement. Each unit of work has stated instructional objectives for the child to reach. A pre-test is administered to measure the student's weaknesses relative to the unit. After the unit has been completed, a post-test is administered to determine the student's progress toward the stated objectives. If the student receives an acceptable

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[47]"Continuous Progress Materials Project," /I/D/E/A/ Annual Report, (Dayton, Ohio: /I/D/E/A/, 1968), p. 16.

score on the post-test he moves on to the next unit. If he falls below the required score, the teacher prescribes a series of activities to correct the weaknesses. The corrective activities definitely would include special individual tutoring.[48]

Year Round School

Many educators think that the basic premise for the nine months school year is outdated and that it should be replaced by year round school programs. They point out that it is not economically feasible to allow school plants to remain idle throughout the summer months and that a year round school program can help solve crowded classroom problems and teacher shortages. The Park Elementary School in Haywood, California has been on a year round program since October, 1968. The year is divided into four periods of ten weeks with a three week vacation between sessions. During three of the vacation periods teachers schedule parent conferences and work days the first week and are free the last two. During the vacation at the beginning of the summer session the teachers are free for the entire three weeks.[49] According to Henson the first high school to operate on a full and true four quarter system complete with a restructured

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[48]Diane Divoky, "To Elaborate Critics Say, But IPI Keeps on Growing," Nation's Schools, LXXXIV (November, 1969), p. 44.

[49]Beverly J. Townsley, "Year-Round School," Education Age, LVIII (September, 1969), p. 6.

and updated curriculum is in Atlanta, Georgia and it is considered successful. The administration and staff of Valley View District Seventy-Six in Romeovilla, Illinois have developed a year round class scheduling program which was introduced in June, 1970.[50] Liebman has charted nine of the most often mentioned year round school calendars.[51]

A year round high school was opened in the fall of 1969 in the Coney Island section of Brooklyn. This newly constructed school, organized on the basis of an eight hour day, will enable students to complete all work during the school day and homework will be eliminated. Students will have no grades, will be permitted to chart their own courses, will work in individual and group projects, and will participate in extra-class activities during school hours. Semesters will be replaced by seven week phases at the end of which courses will be readjusted by computer to student requirements. The students' programs will be so flexible and individualized that they may skip certain classes if they think that the time would be better spent in the library or laboratory.[52]

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[50]George M. Jensen, "Year Round School: Can Boards Sidestep It Much Longer," The American School Board Journal, CLVII (July, 1969), pp. 9-10.

[51]Mary Liebman, "How Nine Year-Round Plans Compare," The American School Board Journal, CLVII (July, 1969), pp. 10-11.

[52]"Twelve-Month School in New York," Phi Delta Kappan, L (April, 1969), p. 498.

School Homes

Since research indicated that fifty per cent of a child's way of organizing his thinking has been reached by age four, schomes (school-homes) are recommended for three to six year old children in concentrated low income areas. As indicated, the name "schomes" is a combination of the words school and home and is so named because an attempt was made to combine the atmosphere of these two institutions. Schomes could be organized through leasing space in apartment buildings, remodeled vacant stores, other commercial buildings, or through new construction.[53]

Magnet School

The concept of the magnet school is embodied in the name itself. The school would be so organized with respect to staff, curricula, resources, and facilities that it would draw together children of many differing socio-economic, racial, ethnic, and cultural backgrounds. To create a stimulating environment the magnet school would encourage experimentation, adoption of selected innovations, evaluation, and diffusion of educational improvements to other schools. Chicago has established its first magnet school at the Marine Drive Campus. One of its outstanding features will be a communications art center. In this center high quality

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[53]Donald L. Davis and John A. Shaver, "New Ideas in Urban Education," Nation's Schools, LXXXIII (March, 1969), p. 79.

programs will be developed in writing, art, music, theater photography, television, and other areas to help the child develop the ability to express his sense of wonder and beauty.[54]

Middle School

One of the fastest growing organizational patterns in education today is the middle school. Various grade groupings have been used in establishing middle schools but the most popular seems to be grades five through eight or grades five through seven. The underlying philosophy of this type of organization is that children are maturing at a much earlier age now than before, and younger children will be able to perform successfully in such a setting with older children. Thus, fifth graders may be grouped with seventh or eighth graders. As established in Chicago schools, the middle school organization groups children by age (11 to 14) rather than by grades. It is designed to meet the frequently frustrating and uniquely complex needs of the adolescent child. Chicago educators feel that a "no retention" concept is basic to the success of the middle school.[55]

Oral Language Program

In 1967 the Southwest Cooperative Educutional Laboratory initiated an oral language program (OLP) when it was

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[54]Ibid. [55]Ibid.

discovered that one of the most critical educational problems in the Southwest was the large numbers of children entering school with no background in English. The OLP is aimed at providing the non-English speaking child with facility in speaking and understanding. The OLP is designed to be used daily by a teacher with groups of not more than ten children ranging in age from five to seven. The lessons are approximately twenty-five minutes long. The early lessons are short and simple conversation with later lessons being longer and more intricate in their patterns of speech and conversation. While part of the class is in the English corner, the other children are busy with related activities.[56]

Instructional Materials Center

Instructional Materials Center (IMC) is the name given to school libraries which in many schools include not only the usual newspapers, pamphlets, books, and magazines but also sound tapes, videotapes, slides, and films. The IMC usually provides space and equipment for students to use these materials on either an individual or small group basis. An innovation used in connection with the IMC is the study carrel. This is an individual booth where a student uses the instructional materials with a fair degree of privacy for note taking.

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[56]Southwestern Cooperative Educational Laboratory, Oral Language Program Provides Basic Tool in Early Grades, (Albuquerque, New Mexico: SWCEL).

Each student is usually assigned his own private carrel.[57]

Micro-teaching

Micro-teaching is a technique used in some institutions of higher learning in the training of teachers. The teaching performance of a student teacher is videotaped as he teaches a simple concept to a group of children. The student and his teacher and perhaps his fellow students then view the tape and discuss the teacher's behavior. This method breaks down the teaching act into simpler components and provides instant feedback for the learner.[58]

Multi-Age Grouping

The newest proposal for grouping in the elementary schools is multi-age grouping but it is as old as the one-room school. Children of all ages are placed in the same classroom and work at their own pace and on their own interests. In this program the children learn from each other. As an older child explains things to younger ones, he not only helps the younger child but he strengthens his own understanding.[59]

Education Park

A unique innovation is the Education Park which is a

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[57]"A Review of the New Language of Education," The Oklahoma Teacher, L (May, 1969), p. 35-36.

[58]Ibid. p. 37. [59]Ibid. p. 37

complex that provides learning opportunities for students from kindergarten through graduate school. The entire educational program is situated in one locale.[60]

Regional Educational Laboratories

Provision for Regional Educational Laboratories was made in Title IV of the Elementary and Secondary Education Act. These regional laboratories serve as centers in which educators can present innovative ideas for study and evaluation. If a proposal seems to have merit, it will be subjected to thorough research by the personnel of the laboratory. It will then be tried in a laboratory setting to determine its usefulness in educational programs. When a proposal proves to be useful, it is disseminated to the area served by the laboratory to be used in the classrooms of the region.[61]

Innovative Instructional Equipment

Also available to educators today is a great amount of innovative instructional equipment. Some of this equipment is briefly described below.

Single Concept Film Loop.--The 8mm Single Concept Film Loop requires no threading; you simply place a film cartridge in place and turn on the switch. Some film loop projectors may be stopped at any point to allow class discussion

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[60] Ibid.

[61] Ray E. Bruce, "A Look At Regional Educational Laboratories," Educational Leadership, XXIV (November, 1966), pp. 185-91.

or to reduce a task or skill to such minute detail that even the slowest learner can grasp the concept. The equipment is so simple to operate that individual students may use it regardless of their ability.[62]

Videotape Recorder.--In using the Videotape Recorder (VTR) the teacher has access to both closed circuit television and a tape recorder. A camera shoots the action which appears on a television monitor and at the same time it is recorded for replay on videotape which also records sound. Instant replay is the process which makes the VTR such a valuable teaching device.[63]

Talking Typewriter.--The Talking Typewriter is a programmed device with which two-year olds have been taught the elements of reading and writing. As the child sits in front of the typewriter an image appears on the screen before him--a cat for instance. A recorded voice tells him it is a cat and asks him to punch the keyboard. The instrument responds only when the child, through trial and error, punches out the correct letters to spell "cat."[64]

Wireless Tabletop Learning Laboratory.--Use of the Wireless Tabletop Learning Laboratory offers a greater degree

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[62]"A Review of the New Language of Education," The Oklahoma Teacher, L (May, 1969), p. 36.

[63]Ibid. [64]Ibid.

of flexibility than all other available learning laboratories. Freed from all connections and cables the wireless laboratories are not confined to prewired carrels or resouce areas but can be moved around the school as the need arises. In most cases wireless equipment permits programing from tape recorders, cassettes, record players, and motion picture sound tracks without disturbing nearby students engaged in other classroom projects.[65]

Multi-Usage Cassette.--The multi-usage cassette came into existence by the synchronization of the already widely used cassette with silent hardware, primarily slide and filmstrip projectors. Most synchronization depends on a tape track with built-in sound signals that automatically trigger advancement of visual frames. This equipment visibly impressed educators at the annual exhibition of the National Audio Visual Association in the summer of 1969 and its use is expected to become widespread.[66]

## In-Service Education

For the purpose of this study, in-service education has been earlier defined as "a planned activity or program of activities, either group or individual, which has as its purpose the upgrading of the instructional competencies and skills

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[65]Phillip Lewis, "Audio Visual Management," Nation's Schools, LXXXIV (November, 1969), p. 66.

[66]"Multiusage Cassettes Take Bows at VAVA Exhibits," Nation's Schools, LXXXIV (October, 1969), p. 86.

of teachers." Hass has broadly defined in-service education of teachers as including all activities engaged in by the professional personnel during their service and designed to contribute to the improvement on the job.[67] Some educators look on in-service education as any activity which results in improvement of the instructional program of a school. This would include incidental activities as well as planned activities.

Teacher training institutions have not yet learned how to turn out the perfect practitioner and probably never will. Even if this were possible, the perfect teacher of today would be very inadequate for the future. Harris has stated, "Inherent in the whole notion of in-service education is the belief that all professional people can grow and develop; that once they become professional adults, they do not or at least should not stand still."[68]

There is diversity of opinion on placing the responsibility for in-service education. Some educators contend that the responsibility is with the individual teacher, while others place it on the administration and school system. Hopefully the extreme importance of a good in-service education program will be recognized by all who are responsible

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[67]C. Glen Hass, "In-Service Education Today," In-Service Education For Teachers, Supervisors, and Administrators, Fifty-Sixth Yearbook of the National Society for the Study of Education, Chapter II (Chicago: University of Chicago Press, 1957), p. 13.

[68]Ben M. Harris, "In-Service Growth--The Essential Requirement," Educational Leadership, XXIV (December, 1966), p. 257.

for the education of children. Administrators should recognize this importance to the extent that they are instrumental in organizing and implementing such programs, school boards to the extent that they are willing to make the necessary budgetary and policy arrangements to carry on the programs, and teachers to the extent that they cooperate fully in all phases of the programs.[69]

Regardless of the availability and the excellence of in-service programs there must be a desire for improvement on the part of individual teachers before the programs will achieve the desired results. The position of the individual teacher relative to in-service education as stated by the National Commission on Teacher Education and Professional Standards is:

> The competent teacher is a growing teacher. The professionally-minded teacher seeks opportunities for continuous growth.
>
> Even with skillfully contrived and carefully administered pre-service programs in teacher education, changing demands, deepening understanding of the qualities of learning and of teaching, and a constantly enlarging body of materials of instruction require each member of the profession to add constantly to his knowledge, and his understanding.[70]

While recognizing the need for more and better planned programs of in-service education, it should be pointed out

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[69]Illinois Education Association, In-Service Education Activities In the Public Schools of Illinois, A Report Prepared by the Research Department, (May, 1960), p. 3.

[70]National Education Association, In-Service Education of Teachers, A Report Prepared by the Research Division (Washington, D. C.: National Education Association, August, 1960), p. 1.

that there are some poor practices and some dangers to be avoided. Steig and Frederick list some of these dangers: "Indiscriminate in-service courses for all teachers, courses offered at times that will consume the energy the teacher should spend on his classes, and the coupling of salary advancements to credits earned in an indiscriminate manner."[71]

Conant proposes to divorce advancement on salary schedules from in-service credit. He states:

> I recommend that school boards should drastically revise their salary schedules. There should be a large jump when a teacher moves from the probationary status to tenure. Any salary increments based on advanced studies should not be tied to course credits earned (semester hours), but only to the earning of a master's degree, based normally on full-time residence of four summer sessions directed toward the development of the competence of the teacher as a teacher. Such a salary increment should be made mandatory by state law.[72]

Despite the admonition by Conant, the chief means by which school systems encourage the professional growth of teachers in service are by rewarding growth through salary advancement and by granting leaves of absence for professional reasons. According to findings reported in the NEA Research Bulletin:

> In 1965-66, one-third of the school systems with 6,000 or more pupils required teachers to show evidence of professional growth to earn salary increments at stipulated intervals. In the same year an

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[71]Lester R. Steig and E. Kemp Frederick, School Personnel and In-Service Training Practices (West Nyack, New York: Parker Publishing Co., Inc., 1969), p. 3.

[72]James B. Conant, The Education of American Teachers (New York: McGraw-Hill Book Company, Inc., 1963), p. 195.

> estimated 94.4 per cent of all systems with 300 or more pupils enrolled granted one or more leaves of absence for professional reasons.[73]

Studies show that there are certain barriers to in-service education. Frequently mentioned are: (1) Overloading the teacher; (2) Depriving the pupil of the teacher's time; (3) Lack of teacher interest and participation; (4) Lack of teacher stamina; (5) Financial limitations; and (6) Problems of isolation peculiar to rural areas.[74]

Bash and Morris suggest that planners of in-service programs should avoid the development of a program that:

1. Provides for the staff to be "lectured to" about the problems.
2. Does not provide opportunity for people who have had certain experiences to interact with those who have not.
3. Is devoid of clear purposes and activities.
4. Does not encourage active participation.
5. Does not have the support of the school board and administration.
6. Is not built on needs and problems that have been identified within the particular system.
7. Is too theoretical.[75]

As rapid and dramatic changes occur in the content of our curriculum and the methods by which learning experiences are presented to our students it becomes evident that there is a need for change in our in-service programs. Just as

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[73]"Professional Growth of Teachers In Service," NEA Research Bulletin, XLV (March, 1967), p. 25.

[74]Ibid. p. 27.

[75]James H. Bash, and Thomas J. Morris, Planning and Implementing In-Service Education Programs In Desegregated Schools (Bloomington, Indiana: Phi Delta Kappa, 1967-68), p. 25.

instructional planners introduce innovative practices in the instructional programs, then planners of in-service education must introduce innovative practices in the in-service progams. Reno advances the following proposition regarding needed changes in our in-service education programs:

> If in-service training is to change teachers in ways that seem necessary, it must break free of the present educational model. It must provide, for instance, opportunity for teachers to experience the lives of people they serve. It must include, in other words, some work experience--in factories, business, social agencies, and pawnshops. Teachers need to get out of schools for a while, for six to eight weeks during the academic year or for a summer or semester.
>
> We need, also, to learn more about learning. Workshops in learning theory are worthwhile but they presume that learning is something that goes on chiefly in classrooms. We know that this is not so: our students tell us that school interrupts their learning. It is vital, therefore, that we get out where the most massive learning experiences occur. And then again, we need to come back and apply what we have learned about learning to make classroom learning not only possible but important and compelling.[76]

There has been very little writing on the goals and purposes of in-service education programs as such but these goals or purposes are inferred in each writing or discussion. In some cases it is difficult to separate goals from the characteristics of a good in-service education program. McFarland and Williams list basic goals of in-service programs as:

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[76]Raymond H. Reno, "In-Service Teacher Training: A Critique, Not An Indictment," Education Age, IV (November-December, 1968), p. 5.

1. In-service education should take into consideration the changing nature of pre-service education.
2. In-service education should have as its objective the improvement of the whole school.
3. In-service education should result in better learning on the part of each child.
4. In-service education should attack problems based upon recognized needs of individuals and groups.
5. In-service education should be the result of the coordinated efforts of the total profession.
6. In-service education should foster a positive attitude toward self-improvement and acceptance of professional responsibilities.
7. In-service education should equal or exceed the highest standard of pre-service education.
8. In-service education should recognize the need for a wide variety of approaches.
9. In-service education can include only those faculty meetings which are planned to meet high standards.
10. In-service education should involve a re-examination of current practices in terms of the best criteria available.[77]

According to Baughman, et al., the primary justification for in-service education is the improvement of the instructional program. To be effective in this improvement, all activities of the in-service program should be directed toward acquisition of skills by teachers to minimize impediments to the instructional program.[78] One administrator, in replying to an opinion poll, stated that a strong in-service program

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[77]William J. McFarland and Lois Williams, "Individualizing In-Service Education," The National Elementary Principal, XLIV (September, 1964), p. 35.

[78]M. Dale Baughman, et al., Administration and Supervision of the Modern Secondary School (West Nyack, N. Y.: Parker Publishing Company, Inc., 1969), p. 77.

contributes to higher teacher morale as well as an improved instructional program.[79]

Research findings reported in the NEA Research Bulletin reveal the following trends and practices in in-service educational programs:

1. Teachers or their representatives are usually involved in planning the in-service program. Administrators, supervisors, and teachers work as a team.
2. Greater use is being made of the professional staff within a school system. Non-college credit programs are conducted by school personnel.
3. School systems are offering a wider variety of opportunities and activities for professional growth in service.
4. School systems are providing more released time during the regular school session for in-service activities.
5. Compensation is being given for time contributed to in-service education by the teacher outside of regular school hours.
6. School systems are extending the period of teacher employment; the additional time is used for in-service education.
7. Salary practices recognize experience and preparation.
8. In-service programs are receiving financial support from sources other than the school system.
9. Nearly all in-service programs have subjective evaluations; systematic statistical evaluations are not widespread.[80]

Taylor listed the following additional trends some of which are now widespread practices:

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[79]"In-Service Programs: Many Enroll, But Few Get Credit," Nation's Schools, LXXXII (July, 1968), p. 49.

[80]"Professional Growth of Teachers In Service," NEA Research Bulletin, XLV (March, 1967), pp. 25-26.

1. Pre- and post-sessions with pay are held. The length of the session depends upon the local school, but the trend in Indiana is for a one week pre-school session and a two-week voluntary summer workshop.
2. A professional library with a place for browsing is provided. Sizeable quantities of materials are available.
3. Faculty meetings are held according to a regular schedule and during regular school hours.
4. A teacher's committee works with the board of education to devise a salary schedule that rewards teacher growth in-service.
5. Teacher's committees make community surveys in connection with curriculum development.
6. Teachers work on faculty committees to study school problems, to make reports, and to carry on experimentation and evaluation.
7. There is a special program for the induction of new teachers into the schools.
8. Small group study meetings are organized for the study of the curriculum.
9. There are provisions for sabbatical leave to study, travel, and recover health.[81]

Areas of need for in-service education were listed by the NEA Research Division in a study conducted in 1968. The teachers indicated much need for in-service education in effective use of a paraprofessional as a teacher aide, computer assisted instruction, educational television, production of audio-visual materials, and audio-visual materials and equipment in teaching. Less than twenty-five per cent of the teachers indicated "much need" for in-service training in teaching methods, psychology of learning and teaching, classroom management and discipline, subject fields,

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[81]Bob L. Taylor, "In-Service Teacher Education Trends," Phi Delta Kappan, XL (December, 1958), p. 139.

general education, human growth and development, and history and philosophy of education. However, there was an indication of "some need" in each of these areas.[82]

The American Association of School Administrators Commission on In-Service Education has established guidelines to follow in the development of in-service programs:

1. Insist that local school boards adopt policies to govern the in-service program.
2. Clearly establish the purposes of the program in the initial stages of planning.
3. Involve in the planning process the people who receive the services as well as the people who provide the services.
4. Tailor the program to fit the needs of the particular district in which it will operate.
5. Begin with problems that worry, disturb, and annoy people.
6. Start where the people are and allow time for growth.
7. Work with people rather than for people.
8. Help people help themselves.
9. Keep the organization simple.
10. Develop the program on a long range basis.
11. Work toward the development of a policy which makes financial support of the program a joint responsibility of the state, the local district, and the service dispensing agency.
12. Make it easy to get a program of services under way.
13. Establish a basis of financial support so that no individual or area will be deprived of services for lack of funds.
14. Avoid financing the program through charges per credit hour to individuals.
15. Bring the right information to bear on the problem at the right time.
16. Maintain flexibility in the program.
17. Seek out and use people with expert knowledge outside the field of education.

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[82]"Teachers' Needs for In-Service Training," NEA Research Bulletin, XLVI (October, 1968), p. 80.

18. Help people to do better the jobs immediately before them.
19. Be content with small beginnings, and move step by step into more complex problems.
20. Employ service personnel who can inspire confidence and make a real contribution.
21. Treat people who are receiving the services as the equals of those who provide them.
22. Draw on the subject matter content of many disciplines.
23. Provide funds for probing into new territory and for demonstration purposes.
24. Recognize that a learning experience in an informal community setting may be as effective as a learning experience in a formal university setting.
25. Place responsibility for giving credit or declining to give credit on the institution that provides the service.[83]

Even though the development of an effective in-service education program for teachers is a challenging task, the importance of such a program to a quality instructional program is well understood and accepted by educators.[84]

## Innovative Practices In In-Service Education

There are many innovative practices in programs of in-service education throughout the country. One school yearly employs five to ten more teachers than it needs and uses them to release regular teachers so that they can carry

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[83]American Association of School Administrators, In-Service Education for School Administration, A Report Prepared by the AASA Commission on In-Service Education for School Administration (Washington, D. C.: AASA, 1963), pp. 77-78.

[84]James H. Bask and Thomas J. Morris, Planning and Implementing In-Service Education Programs In Desegregated Schools, (Bloomington, Indiana: Phi Delta Kappa, Winter, 1967-68), p. 6.

on a teacher visitation program.[85]

Another promising practice is the NDEA Institute. For the first time in history, on a large scale, teachers themselves do not have to bear the expense of retraining. These institutes allow teachers to update their teaching knowledge and techniques and earn stipends at the same time. In some instances the institute enables the teacher to attain a higher place on the salary schedule of his school.[86]

In some schools non-teaching personnel supervise the elementary children while on the playground providing teachers with free time during which they may meet for discussion of school problems.[87]

Another practice that seems to be gaining ground is that of extending the school year for one month during which time the whole staff may work on the improvement of the instructional program. This time may be spent on either cooperative or individual projects.[88]

Some compensation is now being given to teachers for time contributed to in-service education. More and more school boards are at least paying teachers expenses for attendance at

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[85]Dr. Gerald A. Chesin and R. Edward Walsh, "Time-Out for In-Service Education," Virginia Journal of Education, LIX (May, 1966), p. 31.

[86]John Pratz, "So You're Going to An NDEA Institute," NEA Journal, LV (May, 1966), p. 31.

[87]Wilbur E. Hahn, "Noon Workshops for Teachers," Instructor, (February, 1965), p. 7.

[88]Chesin and Walsh, loc. cit. p. 32.

educational conferences and seminars and in some cases they are paying teachers salaries during summer programs.[89]

Another innovative in-service practice is the use of "minicourses." This is a self-contained package of in-service education material designed to improve teachers classroom performance in just fifteen days. It makes use of video-tape playback allowing a teacher to evaluate his own performance and, also, relies on films of master teachers demonstrating methods and techniques of classroom instruction.[90]

Included in the book entitled Educational Innovation In the United States[91] is a list of fifty-five in-service practices. This is by far a greater number than is listed in any other area. The Catalog of Educational Innovations In the Oklahoma Public Schools[92] lists six in-service educational programs.

## Selected Programs of In-Service Education

This section will be devoted to selected programs

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[89]"Professional Growth of Teachers In Service," NEA Research Bulletin, XLV (March, 1967), p. 26.

[90]"A Review of the New Language of Education," The Oklahoma Teacher, L (May, 1969), p. 36.

[91]Berlie J. Fallon (ed.), Educational Innovations In the United States, (Bloomington, Indiana: Phi Delta Kappa, Inc., 1966), pp. ix-xi.

[92]Oklahoma State Department of Education, Catalog of Educational Innovations In the Oklahoma Public Schools, Prepared by the Southwestern Cooperative Educational Laboratory, Inc. and the Oklahoma Curriculum Improvement Commission, (Oklahoma City: Oklahoma State Department of Education, 1967).

avoiding duplications and overlapping as much as possible. The programs reported will be identified by their location, in most cases by school system, but in a few, by general areas.

Wisconsin

The Wisconsin State Department of Public Instruction has added a division of teacher education with primary emphasis being placed on upgrading in-service education programs. The staff includes an assistant superintendent and new supervisors in many curriculum areas.[93]

San Francisco, California

In 1966 the San Francisco Public Schools provided seventeen in-service education courses for its teachers. Among the courses offered were two in audio-lingual methods in teaching French and Spanish in elementary schools, two in teaching elementary literature and social science, and one in art designed for elementary teachers. The art course was structured to help teachers plan use of local art museums in their art instruction. A course called "Social Change: Implications for Teaching and Learning" was organized to explore the social changes occuring since World War II. This course, open to all teachers and administrators, was to study the educational implications of social change. A course

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[93]Alexander Frazier, "News Notes," Educational Leadership, XXIV (December, 1966), p. 290.

entitled "Great Decisions 1967" was offered to secondary school teachers. The topics were: (a) Communist China and the United States; (b) India and Pakistan; (c) Vietnam; (d) Yugoslavia and Romania; (e) Spread of nuclear weapons; (f) New Deal in Chile; (g) NATO in crisis; and (h) The war on hunger.[94]

Tuscon, Arizona

The Tuscon School System adopted a policy in 1965 which would allow teachers with seven years experience in the district to take sabbatical leave for further study. During the time of leave teachers receive half-pay.[95]

San Diego, California

In the spring of 1968 the San Diego, California Public Schools made available to teachers in-service courses in the role and problems of the Mexican-American, language and linguistics, anthropology in our modern culture, literature for grades 1-3, a multi-dimensional approach to first grade reading, and inquiry approaches to teaching secondary social studies.[96]

Baltimore, Maryland

The Baltimore, Maryland School System conducted workshops in the spring of 1968 for elementary and secondary

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[94]Ibid. p. 291. [95]Ibid.

[96]Alexander Frazier, "News and Notes," Educational Leadership XXV(May, 1968), p. 783.

paraprofessionals. A workshop program, consisting of five two-hour sessions, was provided to teach operation of instructional and office machines and to discuss the personal and ethical responsibilities of aides.[97]

Philadelphia, Pennsylvania

In the second semester of the 1967-68 school year the Philadelphia Public Schools offered its employees ninety-nine in-service courses. Included were forty-five offered to teachers of all levels, thirty-seven to elementary teachers, eleven to secondary teachers, and six for secretaries. The areas covered were Negro poetry, Negro history, teaching Negro history in a comprehensive social studies program, basic study program of the Negro in American history, and emerging Africa: traditions, problems, and expectations.[98]

Hunter College of the City University of New York

Disturbed by the picture of effective in-service education reaching only a fraction of the elementary teachers, very little innovation being tried in disadvantaged schools, and the poor conditions which were detrimental to sound long range educational planning, the staff at Hunter College of the City University of New York planned an experimental NDEA Institute for large numbers of elementary teachers. The institute was planned in the area of elementary science. Experts

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[97] Ibid. p. 785. [98] Ibid. p. 793.

from the fields of childhood education, science education, and science were brought together to work with elementary supervisors and college personnel in the spring prior to the institute and with the 225 teachers in the summer. The need for large group experiences was met by lectures and kinescope viewings. Following these meetings each supervisor took his teachers for small group discussions or took them to a nearby summer play school for work with children. The major emphasis of the program was on observation, investigation, inquiry, and discovery. This goal was met by intensive laboratory work and necessary discussion for clarifying concepts. All of the activities of the summer institute were carried on in a school which serves disadvantaged children.[99]

Erie County, New York

The Board of Cooperative Educational Services for the First Supervisory District in Erie County with headquarters in Buffalo, New York has banded together with nineteen independent school districts. The purpose of the merger is to provide a very ambitious program of in-service education for its teachers, supervisors, and administrators. During the 1968-69 school year the Board's Curriculum Development Department planned and conducted five comprehensive courses based on needs indicated by teachers. These courses were; (1)

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[99]Harold E. Tannenbaum and Archie Lacey, "For Elementary Teachers..Mass In-Service Education?" Educational Leadership, XXV (October, 1967), pp. 51-53.

Economic Education for Elementary School Instructors, (2) An instructional television workshop, (3) Metallurgy for High School Chemistry Teachers, (4) A middle school workshop, and (5) Computer technology programming. In addition, the Cooperative Board offered courses in vocational education, data processing, and special education. Each school district formulated its own policy regarding credit for salary purposes.[100]

Spokane, Washington

Dr. Albert Ayers, Superintendent of Spokane, Washington Public Schools, gives strong support to the Projects 81 Center which has been established in his district. The task of the Center is to conduct research and disseminate promising innovative educational practices in Spokane schools and elsewhere in the Pacific Northwest. Basically a program of in-service training, the Center carries out its purposes through workshops, conferences, publications, audio-visual materials, lectures, visits, college courses, research projects, and consultant services. Activities are developed in response to requests of participants. Activities of the Project 81 Center have included study of inquiry teaching, continuous progress materials, modular scheduling, team teaching, community relations, curriculum materials, non-graded schools, and cybernetics. The Center, also, considers its numerous visitors

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[100]Justus A. Prentice, "The Other Side of the Coin . . . Buffalo," Education Age, V (November-December, 1968), pp. 8-12.

as a valuable in-service activity.[101]

Pikeville, Kentucky

Pikeville was the center in the summer of 1968 for a Reading Seminar Workshop for the teachers of Pike County, Kentucky. This project was conducted in the center of a disadvantaged area by specialists from various parts of the Nation. The participants, 100 teachers and 30 principals from Pike County, actually worked with educationally deprived children from grades one through three. Three modes of instruction were used during this workshop type experience: (1) The systems approach, (2) The individualized, programmed approach, and (3) The modern basal approach. The teachers participated in a number of demonstrations involving the use of new media and equipment.[102]

Atlanta, Georgia

The Atlanta, Georgia School System was among the first in the nation to conduct a comprehensive survey of in-service education needs. The overwhelming response of its teachers was for courses in individualizing instruction and adapting methods and materials to instruction of the slow learner. In-service programs instituted included a workshop for teachers who elected to transfer to schools whose ethnic composition

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[101]Harry O. Finnegan, "The Other Side of the Coin . . . Spokane," Education Age, V (November-December, 1968), pp. 10-11.

[102]Elba Caincross, "The Other Side of the Coin . . . Pikeville," Education Age, V (November-December, 1968), pp. 11-13.

was different from their own, a study of cooperative staff grouping, and an induction procedure for teachers newly assigned to slum schools. A noteworthy program of in-service education for new teachers has also been developed. To carry out all phases of the in-service program, a Learning Resources Center has been established. This Center contains a professional library, audio-visual materials, and a variety of other resources for use in planning and conducting in-service activities.[103]

Quincy, Illinois

In 1965 the Quincy, Illinois Schools, in cooperation with the Quincy Education Association, initiated a program of in-service education designed to establish a climate for meaningful educational change within the school system. Since that time a great majority of Quincy school professional staff members have participated in activities ranging from "one-day in-service released time workshops" to a five-week summer dialogue for teachers and students. Among the most successful of these activities were several day-long institutes for groups of fifty teachers from all grade levels and subject areas, followed by overnight retreats at which these teachers and administrators discussed common educational

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[103]R. Ruel Morrison and E. Curtis Henson, "The Other Side of the Coin . . . Atlanta," Education Age, V (November-December, 1968), pp. 13-14.

problems and goals.[104]

Santa Cruz, California

The Santa Cruz, California Public School System has established an in-service education program designed to allow teachers to develop their own ideas for improving instruction. The program called "Project Assignments," gives teachers' proposals for curriculum improvement three year tryouts. A special committee, composed of the superintendent, another administrator, and seven teachers, evaluates teacher proposals. After approval by the evaluation committee, the proposal must be approved by the board of education. If approval is granted, the board allots funds for each project to provide for necessary expenses involved in developing the project.

The first year of the project is spent in planning and research and sketching out the pikot stage of the second year. In the second year the project gets into the classroom little by little. During the third year projects are re-evaluated by teacher participants. At the conclusion of the third year a decision is made as to whether or not the project should be adopted permanently.[105]

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[104]Lawrence P. Creedon and Carl R. Deyeso, "The Other Side of the Coin . . . Quincy," Education Age, V (November-December, 1968) pp. 36-37.

[105]"In-Service Training," School Management, XII (February, 1968), pp. 75-77.

Berkeley, California

The Berkeley, California School District implemented an unprecedented program of teacher exchange as one part of a comprehensive in-service program conducted in preparation for integration of the school system. To launch the program fourteen full-time teachers were employed as Visiting Exchange Teachers (VETS). These VETS moved into regular classrooms to free over 450 regular teachers to spend four days visiting in different parts of the city. Even though the original emphasis was on racial exposure, the teachers stated that the greatest value came from being able to see how others operate.[106]

Webster Groves, Missouri

In the Webster Groves, Missouri Schools teachers are required to gain six hours of college credit every five years. However, other in-service activities may be substituted for these credit courses. In attempting to relate individual growth efforts to school district needs, each staff member schedules a meeting with his building principal and the director of elementary or secondary education. These meetings take place at the beginning of a program leading to advanced salary schedules or during each five year employment period. In these meetings a program of in-service

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[106]Harold J. Maves, "Insight Through In-Service," Todays Education, (April, 1969), p. 42.

education is planned that suits the needs of both the teacher and the school district.[107]

Selden, New York

Administrators in the Selden, New York school system have embarked on a program of in-service training which involves videotaping teachers in action with small groups of children. The tape is studied with the children present, then the teacher tries again in an attempt to correct his shortcomings.[108]

Evanston, Illinois

A program of in-service education has been established in the Evanston, Illinois elementary schools to help teachers become aware of the problems associated with integration. It consists of summer institutes, district-wide follow-up programs, and sensitivity training retreats. The two five week summer institutes have considered issues involving integration and black problems. The sensitivity training retreats started out as basically teacher programs but have grown to include principals and assistant principals. The sessions started on Friday evenings and lasted until noon on

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[107]Joan M. Krater, "Teachers Decide How They Can Improve," Nation's Schools, LXXIX (February, 1967), p. 68.

[108]Jack Tanzman, "How Videotape Improves Teaching," School Management, (August, 1969), pp. 56-58.

on Sunday. They were held in locales which offered plenty of privacy from the normal routines of the week.[109]

Burlington, Vermont

The Burlington, Vermont Schools have established a district-wide Audio-Visual Learning and In-Service Center that focuses on the latest technological techniques. As a result of this program,both public and parochial teachers are now using audio-visual equipment much more effectively. Courses taught include use of tape recorders, dry mounting technics, use of 16mm and 8mm projectors, graphics, and copying machines.[110]

Appalachia Education Laboratory, Charleston, West Virginia

The Appalachia Education Laboratory located in Charleston, West Virginia is offering a computerized in-service program in the "new math" to teachers in Virginia and Pennsylvania. Computer systems are being transported to three regional centers where they remain for eight weeks. During this time 450 elementary teachers can be given thirty hours of instruction including twenty-five hours of review of the "new math" and how best to use it.[111]

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[109]Laval S. Wilson, "In-Service Training: Lifeline For Integration," Nation's Schools, LXXXIV (October, 1969), pp. 70-76.

[110]Robert J. Rhein, "Burlington's A-V In-Service Training Available to All," Nation's Schools, LXXXIV (October, 1969), p. 84.

[111]"Computers Invade Appalachia for 'New Math' Training," Nation's Schools, LXXXIV (October, 1969), p. 120.

Springfield, Massachusetts

Teachers in the Springfield, Massachusetts school system are encouraged to become members of teams to visit other schools to study practices leading to the improvement of the reading curriculum in their own system. On returning, the visiting committee, usually consisting of a teacher and a principal, make complete reports to the entire faculty.[112]

Rochester, Minnesota

Elementary teachers new to the Rochester, Minnesota Schools are required by school policy to take a course in the teaching of handwriting during their first two years of employment. Additional courses, twelve clock hours in length and carrying one-fourth unit of board credit, are taken with the approval of the principal. All expenses are paid by the Board of Education.[113]

New Orleans, Louisiana

The in-service education program in the New Orleans School System is designed for orienting teachers new to the system and to assist veteran employees to become more proficient in the instructional program. Newly appointed teachers

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[112]Lester R. Steig and E. Kemp Frederick, School Personnel and In-Service Training Practices, (West Nyack, New York: Parker Publishing Co., Inc., 1969), p. 4.

[113]Ibid.

are required to participate the first year after which participation is on a voluntary basis.[114]

Poverty Area Programs

The three programs described in this section were all organized under Title I of the Elementary and Secondary Education Act and because of this were established in poverty areas. The programs will be identified by the general area but not by exact location.

One program in a city in Florida involved 500 teachers who spent their summer in classes conducted by faculty members of a nearby university. The program was divided into two sections. One section was a nine semester hour course in which 200 teachers were learning to become reading specialists. The other section, taken by 300 teachers, was a six semester hour course called "Working With Disadvantaged Youth."[115]

In a middle-sized New England city, after a survey of the teachers affected, the board of education organized a summer institute consisting of 100 teachers from its inner-city schools. These teachers were paid a stipend of $20 a day. No less than five teachers from each school were chosen

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[114] Ibid. p. 6

[115] United States Department of Health, Education, and Welfare, Summer Education for Children of Poverty, A Report Prepared by the National Advisory Council on the Education of the Disadvantaged Children (Washington, D. C.: United States Government Pinting Office, 1966), pp. 25-29.

by the principals of the district. This was done so that the teachers would be able to support each other in their introduction of innovative practices. In the program there were lecture and discussion sessions on employment and job counseling, legal service, housing, attitudes of inner-city residents, and other areas vital to youth of poverty areas.[116]

In a city in the mid-south the administrators identified as a major problem the low concept which teachers in deprived neighborhoods had of themselves. An attempt was made to change the thinking of 600 teachers by placing emphasis on the special professional challenge with which they were charged. The format of the program included two weeks of lecture-discussion led by nationally known authorities on the disadvantaged and then dividing the teachers into eleven workshops to discuss special problems in different curriculum fields.[117]

This chapter has consisted of a review of the literature and a description of selected programs in the areas of educational innovation and in-service education of teachers. The next chapter will show comparisons among selected categories of Oklahoma teachers with respect to the introduction of innovative practices into their classrooms, and will examine these practices with respect to subject matter and methodology areas.

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[116] Ibid. [117] Ibid.

# CHAPTER III

## INNOVATION IN OKLAHOMA SCHOOLS

This chapter is concerned with an examination of the various categories of respondents who reported the introduction of innovative practices into their classrooms. Also included is an examination of the innovative practices grouped according to subject matter and methodology areas.

### Comparisons of Categories of Respondents Reporting Innovations

This part of the chapter contains an examination of the characteristics of respondents who reported the introduction of innovative practices with respect to categories of size of schools in which they are employed, grade level taught, sex, years of experience, and levels of preparation.

Table 4 shows the number and percentage of respondents reporting innovative practices arranged according to the size of schools in which they worked. Of the 391 respondents, 296 or 75.7 per cent reported having instituted one or more innovative practices during the two year period surveyed. In the small school category (below 50 teachers), 70.7 per cent reported innovations; in the middle category (50 to 149 teachers), the percentage was 84.5 per cent; and

in the larger school category (150 or more teachers), the percentage was 73.9 per cent.

TABLE 4.--The number and percentage of respondents who reported innovative practices according to size of schools

| Size of Schools | No. of Respondents | Respondents Reporting Innovative Practices | |
|---|---|---|---|
| | | No. | Pctg. |
| Below 50 Teachers | 58 | 41 | 70.7 |
| 50-149 Teachers | 84 | 71 | 84.5 |
| 150 or more Teachers | 249 | 184 | 73.9 |
| Total | 391 | 296 | 75.7 |

The Z test, a statistical procedure used to compare two sample proportions of unequal populations, was used to test between categories the proportion of those reporting innovative practices to the total respondents in each category. The null hypothesis tested was that there was no significant difference in the proportions of respondents reporting innovative practices from the different related categories. At the .05 level of Alpha, the hypothesis was accepted if Z was less than 1.96 and was rejected if Z was greater than 1.96 while at the .01 level of Alpha the hypothesis was rejected if Z was greater than 2.58. If the hypothesis was rejected, the alternate hypothesis, that there was a significant

difference, would be accepted.

In comparing the proportion of respondents reporting innovative practices in the schools with less than 50 teachers with those in schools with 50 to 149 teachers, Z was 1.985. When comparing the proportion of respondents reporting innovative practices in schools with less than 50 teachers with those in schools with 150 or more teachers, Z was .497. In the comparison of the proportions of respondents from schools with 50 to 149 teachers with schools of 150 or more teachers, Z was 1.989. On the basis of these calculations, it can be said that at the .05 level of Alpha teachers in schools with 50 to 149 teachers were involved more in innovation than those in either the schools with less than 50 teachers or those with 150 or more teachers. There was no significant difference in the involvement in innovation of the latter two groups.

Table 5 shows the number and percentage of respondents reporting innovative practices according to grade level taught, sex, years of experience, and levels of preparation. It is shown in this table that of 190 elementary respondents, 155 or 81.6 per cent, and of 201 secondary respondents, 141 or 70.1 per cent, reported innovative practices. Computing Z for these two categories, it was found to be 8.329. On the basis of this computation, it can be said that at the .01 level of Alpha, elementary teachers were more involved in innovation than secondary teachers.

It is shown in Table 5 that 59 or 60.2 per cent of the 98 male respondents and 237 or 80.9 per cent of the 293 female respondents reported innovative practices. When Z was calculated, it was found to be 4.133 indicating that at the .01 level of Alpha, female teachers were more involved in innovation than male teachers.

It is further revealed in Table 5 that 67 or 69.1 per cent of the 97 respondents with from 5 to 10 years of experience, 59 or 76.6 per cent of the 77 respondents with from 11 to 15 years of experience, and 170 or 78.3 per cent of the 217 respondents above 15 years of experience reported introducing innovative practices. When computing Z for comparison of teachers with from 5 to 10 years of experience and 11 to 15 years, it was 1.107; for comparison of teachers with from 11 to 15 years of experience and above 15 years, Z was .587; and for comparison of teachers with from 5 to 10 years of experience and above 15 years, Z was 1.764. On the basis of these calculations, it can be said that there were no significant differences in teacher involvement in innovation according to years of experience.

In Table 5 it is also shown that 122 or 70.1 per cent of the 174 respondents with bachelor's degrees and 174 or 80.2 per cent of the 217 respondents with master's degrees reported innovative practices. The calculation of Z for comparison of teachers with bachelor's and those with master's degrees yielded a figure of 2.307. This shows that at the .05 level

of alpha, teachers with master's degrees were more involved in innovation than teachers with bachelor's degrees.

TABLE 5.--The number and percentage of respondents reporting innovative practices according to grade level taught, sex, years of experience, and levels of preparation

| | Grade Level | | Sex | | Years of Experience | | | Levels of Preparation | |
|---|---|---|---|---|---|---|---|---|---|
| | Elem. | Sec. | Male | Female | 5-10 | 11-15 | Above 15 | Bachelor's | Master's |
| No. of Respondents | 190 | 201 | 98 | 293 | 97 | 77 | 217 | 174 | 217 |
| No. Reporting Innovation | 155 | 141 | 59 | 237 | 67 | 59 | 170 | 122 | 174 |
| Percentage | 81.6 | 70.1 | 60.2 | 80.9 | 69.1 | 76.6 | 78.3 | 70.1 | 80.2 |

## Innovative Practices in Oklahoma Schools During 1967-69

In Part II, Section 2, of the questionnaire respondents were requested to briefly describe or identify innovative practices which they had instituted in their classrooms during the past two years. Table 6 shows the number and percentage of these practices grouped according to subject matter categories. The categories were arranged in decending order.

This table shows that mathematics and reading were at the top of the rankings each with 76 or 19.7 per cent of the total practices. Of the 76 practices in mathematics, 43 referred to the introduction of the new mathematics. In the field of reading the most frequently mentioned innovation was the use of the Science Research Associates Reading Laboratory which was listed 16 times. Six respondents, including one teacher of accelerated students, gave a phonetic approach to reading as an innovation, eight made references to grouping, three to individualized instruction, and two to independent study. While a large part of the innovative practices in reading were remedial in nature, only six respondents actually described them as such.

Of the total innovative practices identified, 65 or 16.9 per cent were in the field of language arts. Included were 38 practices in English and literature, 11 in composition and seven in spelling. A linguistic approach to grammar was listed seven times, improvement in creative writing five, and team teaching and use of paperback books twice each.

Fifty-three or 13.8 per cent of the total innovative practices identified were in the area of Social Studies. The most frequently mentioned practice in this field was the Basic Activities of Man (BAM) program which was identified by eight respondents.

TABLE 6.--The number and percentage of innovative practices in subject matter categories as reported by respondents

| Categories | Innovative Practices | |
|---|---|---|
| | Number | Percentage |
| Mathematics | 76 | 19.7 |
| Reading | 76 | 19.7 |
| Language Arts | 65 | 16.9 |
| Social Studies | 53 | 13.8 |
| Science | 24 | 6.2 |
| Art | 17 | 4.4 |
| Music | 16 | 4.2 |
| Physical Education | 12 | 3.1 |
| Home Economics | 9 | 2.4 |
| Industrial | 8 | 2.1 |
| Business Education | 7 | 1.8 |
| Foreign Language | 7 | 1.8 |
| Other | 15 | 3.9 |
| Total | 385 | 100.0 |

Following the social studies category there was a considerable decrease in the number and percentage in each category. Of the total 385 practices, 24 or 6.2 per cent were in the field of science, 17 or 4.4 per cent in art, 16 or

4.2 per cent in music, 12 or 3.1 per cent in physical education, nine or 2.4 per cent in home economics, eight or 2.1 per cent in industrial arts, seven or 1.8 per cent in business education and foreign language and 15 or 3.9 per cent in other subject matter areas. Included in the category for other subject matter areas were six references to library usage, three to penmanship, two to psychology, and one each to health, photography, driver education, and occupations.

Table 7 shows the number and percentage of innovative practices in methodology as reported by respondents. The categories are arranged in descending order. Some practices could not be cleanly categorized and therefore are reported in both subject matter and methodology areas.

TABLE 7.--The number and percentage of innovative practices in methodology categories as reported by respondents

| Categories | Innovative Practices | |
|---|---|---|
| | Number | Percentage |
| Educational Media | 152 | 53.1 |
| Grouping for Instruction | 48 | 16.8 |
| Individualized Instruction | 22 | 7.7 |
| Other | 64 | 22.4 |
| Total | 286 | 100.0 |

As shown in the Table 7, by far the greatest number of innovative practices in methodology involved the use of educational media materials and equipment with 152 or 53.1 per cent of the total practices being in that area. The most frequently mentioned media aids were the overhead projector and transparancies which were listed 70 times. Running a distant second was the use of tapes and tape recorders, mentioned 34 times. Other equipment or materials, with the number of listings were: Filmstrips, 17; Record players and records, 16; 16mm films, 13; Controlled reader, 12; Ear phones, eight; Slides, seven; Programmed material, seven; Commercial television programs, six; Closed circuit television, six; Tachistoscope, five; Educational television, four; Opaque projectors, three; Copying machines, three; Videotape, three; View master, three; Puppets, two; and the media center which contains these aids, four.

Of the total 286 innovative practices in the area of methodology, 48 or 16.8 per cent were categorized in the area of grouping for instruction, 22 or 7.7 per cent in individualized instruction, and 64 or 22.4 per cent in other practices. Included in the "other practices" category were five references to team teaching, five to the use of student helpers, three to a conceptual approach to teaching, three to independent study, three to the use of daily newspapers, two to reporting to parents, two to the ungraded primary, and 41 to methods listed only once.

This chapter has presented the innovative practices reported by respondents. The next chapter will report the in-service activities in which respondents participated during the 1967-68 and 1968-69 school years, and identify those activities which were the source of the innovative practices reported in Chapter III.

# CHAPTER IV

# IN-SERVICE EDUCATION ACTIVITIES AND THEIR RELATIONSHIP TO INNOVATIVE PRACTICES IN OKLAHOMA SCHOOLS

This chapter is concerned with in-service activities in Oklahoma school systems during the school years 1967-68 and 1968-69 as revealed by the responses to Part II, Section 3, of the questionnaire. In-service activities were examined from two standpoints: (1) In-service activities in which the respondents participated during the period surveyed; and (2) In-service activities which prompted innovative practices.

## In-Service Participation

In the questionnaire developed for the study (Appendix II) respondents were requested to complete Division 3A of Part II regardless of whether they reported innovative practices. In this division they were to indicate from a list of 26 in-service activities those in which they had participated during the past two years. At the end of the checklist space was provided for the addition of activities not included in the questionnaire. Of the 391 respondents, 14 did not fill in Division 3A leaving a total of 377 usable responses for this part of the study.

Table 8 shows the number and percentage of respondents reporting participation in each in-service activity. The activities were arranged in descending order according to participation with percentages computed on the basis of 377 respondents and on the basis of the total participation by all respondents.

As shown in Table 8, the activity with the greatest participation was, "Reading from professional magazines." Of the total 377 respondents, 296 or 78.5 per cent reported participation in this activity. Participation in this activity was 8.6 per cent of the total participation of all respondents in all activities. According to these figures, 21.5 per cent of the respondents did not read from the professional literature, a situation hard to understand. Between this and the second ranked activity there was a decrease in participation of 40 respondents or 10.6 per cent in the percentage of total participation in all activities.

In the next six activities the range in participation was from 256 respondents or 67.9 per cent of the respondents participating in activity Number 2, "Attendance at local professional meetings," to 226 respondents or 59.9 per cent of the respondents participating in activity Number 7, "Attendance at local school workshops." The range in total participation by all respondents among the six activities was from 7.4 per cent to 6.5 per cent.

TABLE 8.--In-service activities in which respondents reported participation, arranged in descending order according to the number and percentage participating in each activity.

| Activity | Number Respondents | Respondents Reporting Activity | | Pctg. of Total Participation All Respondents All Activities* |
|---|---|---|---|---|
| | | No. | Pctg. | |
| 1. Reading from professional magazines | 377 | 296 | 78.5 | 8.6 |
| 2. Attendance at local professional meetings | 377 | 256 | 67.9 | 7.4 |
| 3. Attendance at state OEA meetings | 377 | 249 | 66.0 | 7.2 |
| 4. Attendance at district OEA meetings | 377 | 249 | 66.0 | 7.2 |
| 5. Attendance at faculty meetings | 377 | 243 | 64.5 | 7.0 |
| 6. Reading from professional books | 377 | 228 | 60.5 | 6.6 |
| 7. Attendance at local school workshops | 377 | 226 | 59.9 | 6.5 |
| 8. Suggestions from supervisors or administrators | 377 | 178 | 47.2 | 5.2 |
| 9. Viewing national television programs | 377 | 162 | 42.9 | 4.7 |
| 10. Formal on campus course work | 377 | 136 | 36.1 | 3.9 |
| 11. Interaction with student teacher | 377 | 126 | 33.4 | 3.6 |
| 12. Attendance at special subject matter conference | 377 | 124 | 32.9 | 3.6 |
| 13. Travel | 377 | 122 | 32.4 | 3.5 |
| 14. Demonstration teaching by others | 377 | 119 | 31.6 | 3.4 |

*This percentage is calculated by dividing the number reporting participation in the activity by the total number of activities reported by all 377 respondents (3452).

(cont'd on next page)

TABLE 8.--continued

| Activity | Number Respondents | Respondents Reporting Activity | | Pctg. of Total Participation All Respondents All Activities |
|---|---|---|---|---|
| | | No. | Pctg. | |
| 15. Discussion with special consultant | 377 | 113 | 30.0 | 3.3 |
| 16. Attendance at workshops on college campuses | 377 | 101 | 26.8 | 2.9 |
| 17. Visiting other teachers classrooms in your own school system | 377 | 84 | 22.3 | 2.4 |
| 18. Attendance at workshops in other schools | 377 | 83 | 22.0 | 2.4 |
| 19. Local in-service television programs | 377 | 67 | 17.8 | 1.9 |
| 20. Extension course work | 377 | 64 | 17.0 | 1.9 |
| 21. Visiting classrooms in other school systems | 377 | 57 | 15.1 | 1.7 |
| 22. Attendance at regional professional meetings | 377 | 48 | 12.7 | 1.4 |
| 23. Summer institutes | 377 | 47 | 12.5 | 1.4 |
| 24. Attendance at national professional meetings | 377 | 26 | 6.9 | 0.8 |
| 25. Year long institutes | 377 | 3 | 0.8 | 0.1 |
| 26. Leaves of absence for professional study | 377 | 2 | 0.5 | 0.1 |
| 27. Other | 377 | 44 | 11.7 | 1.3 |
| Total | | 3453 | | 100.0 |

Only 249 or 66 per cent of the respondents reported attendance at district or state OEA meetings. This seems to be quite low as does the participation of only 243 or 64.5 per cent in faculty meetings. One possible explanation for the low percentage of participation in faculty meetings may be that respondents did not consider the meetings they have attended to be in-service activities and, therefore, failed to indicate participation.

Between activity Number 7, "Attendance at local school workshops," and activity Number 8, "Suggestions from supervisors or administrators," there was a decrease of 48 respondents or 12.7 percentage points.

In activities 10 through 23 the range in participation was from 136 or 36.1 per cent of the respondents to 47 or 12.5 per cent. The range in total participation in all activities was from 3.9 per cent to 1.4 per cent.

The remaining three activities given in the checklist were: "Attendance at national professional meetings," in which 26 respondents or 6.9 per cent or .7 per cent of the total reported participation; "Year long institutes," in which three or .8 per cent or .1 per cent of the total reported participation; and "Leaves of absence for professional study," in which two or .5 per cent or .1 per cent of the total reported participation.

The checklist was left open at the end for addition of in-service activities. As shown in Table 8, respondents

reported participation in 44 activities not included in the questionnaire. These 44 activities fell into the following general categories: Exchange of ideas among teachers, 12; Summer school teaching, seven; Workshops by Educational Development Laboratories, two; Curriculum revision with supervisors during summer vacation, two; and Miscellaneous, 21.

If respondents reported attendance at either a regional or national professional meeting, they were requested to identify the meeting. Of the 48 respondents indicating attendance at a regional meeting, 12 identified meetings of the Classroom Teachers Association; 10, reading conferences; two, a North Central Association of Colleges and Secondary Schools meeting; two, an industrial arts conference; and two, Delta Kappa Gamma meetings. Each of the following was identified by one respondent; physical fitness conference, National Education Association regional conference, vocational home economics conference, professional improvement meeting, and National Association of Science Teachers. Fifteen respondents failed to identify the meeting. Of the 26 respondents attending a national professional meeting, three identified a meeting of the National Council of Teachers of Mathematics; three, a meeting of the National Council of Teachers of English; two, a National Education Association convention; two, a meeting of the National Council of Teachers of Social Studies; two, international reading conferences; and, two, American Council on Educational Instruction conferences.

Each of the following was listed once: American Industrial Arts Association, physical fitness association, National Elementary Principals Association, American Home Economics Association, Future Homemakers of America, and National Education Association curriculum meeting. Six respondents failed to identify the meeting.

In-Service Activities Which Prompted Innovation

Respondents reporting introduction of innovative practices in their classrooms were requested to complete Division 3B of Part II of the questionnaire (Appendix II). In this division they were to identify on the checklist provided the one primary source of the idea which prompted each of the innovative practices identified in Section 2 of Part II.

Table 9 shows the number of respondents who reported each of the in-service activities as the primary source of the idea prompting one or more innovative practices. It also shows the relationship, in percentages, which the number reporting the activity as a source of ideas bore to the number reporting participation in the activity. The activities were arranged in descending order according to the percentages. As shown in Table 9, the top ranked activity, "Summer institutes," was reported as the primary source of the idea which prompted innovation by 21 or 44.7 per cent of the 47 respondents reporting participation in the activity. The second ranked activity, "Formal on campus course work," was reported as the primary source of the idea which prompted

TABLE 9.--In-service activities prompting innovative practices, arranged in descending order according to the relationship which the number reporting the activity as a source of ideas bore to the number reporting participation in the activity

| Activity | Number Reporting Participation | Respondents Reporting Activity as Primary Source of Idea Prompting Innovative Practices | |
|---|---|---|---|
| | | Number | Pctg. |
| 1. Summer institutes | 47 | 21 | 44.7 |
| 2. Formal on campus course work | 136 | 46 | 33.8 |
| 3. Suggestions from supervisors or administrators | 178 | 57 | 32.0 |
| 4. Attendance at workshops on college campuses | 101 | 26 | 25.7 |
| 5. Extension course work | 64 | 16 | 25.0 |
| 6. Attendance at local school workshops | 226 | 40 | 17.7 |
| 7. Attendance at national professional meetings | 24 | 4 | 16.6 |
| 8. Attendance at special subject matter conference | 124 | 20 | 16.1 |
| 9. Reading from professional magazines | 296 | 47 | 15.9 |
| 10. Discussions with special consultant | 113 | 14 | 12.4 |
| 11. Local in-service television programs | 67 | 7 | 10.4 |
| 12. Attendance at regional professional meetings | 48 | 5 | 10.4 |
| 13. Demonstration teaching by others | 119 | 11 | 9.2 |

Continued on next page

TABLE 9.--continued

| Activity | Number Reporting Participation | Respondents Reporting Activity as Primary Source of Idea Prompting Innovative Practices | |
|---|---|---|---|
| | | Number | Pctg. |
| 14. Visiting classrooms in other school systems | 57 | 5 | 8.8 |
| 15. Reading from professional books | 228 | 16 | 7.0 |
| 16. Attendance at workshops in other schools | 83 | 5 | 6.0 |
| 17. Attendance at faculty meetings | 243 | 9 | 3.7 |
| 18. Attendance at state OEA meetings | 249 | 8 | 3.2 |
| 19. Attendance at local professional meetings | 256 | 7 | 2.7 |
| 20. Travel | 122 | 3 | 2.5 |
| 21. Visiting other teachers classrooms in your own school system | 84 | 2 | 2.4 |
| 22. Interaction with student teacher | 126 | 2 | 1.6 |
| 23. Viewing national television | 162 | 2 | 1.2 |
| 24. Leaves of absence for professional study | 2 | 1 | 50.0 |
| 25. Attendance at district OEA meetings | 249 | 0 | 0.0 |
| 26. Year long institutes | 3 | 0 | 0.0 |
| 27. Other | | 40 | |

innovation by 46 or 33.8 per cent of the 136 respondents reporting participation in the activity. The activity ranking third, "Suggesions from supervisors or administrators," was reported as the primary source of the idea which prompted innovation by 57 or 32.0 per cent of the 178 respondents reporting participation in the activity. The fourth place activity, "Attendance at workshops on college campuses," was reported as the primary source of the idea which prompted innovation by 36 or 25.7 per cent of the 101 respondents reporting participation in the activity. Occupying fifth place in the rankings, "Extension course work," was reported as the primary source of the idea which prompted innovation by 16 or 25.0 per cent of the 64 respondents reporting participation in the activity.

It is noted that four of the activities occupying the first five places in the rankings are planned and carried out by personnel from colleges or universities. Of the 351 respondents reporting participation in all college or university oriented activities, including, "Year long institutes," 109 or 31.1 per cent reported them as the primary source of the idea which prompted innovation. It is further shown that only the top ranked five activities were reported by 25.0 per cent or more of the participants as being sources of ideas prompting innovative practices. Fourteen activities were reported by less than 10.0 per cent of the participants as being primary sources of ideas prompting innovative practices.

From activities Number 6 through Number 23, the percentage of respondents reporting the activities as the primary source of the idea leading to innovative practices ranged from 17.7 to 1.2. The number of respondents ranged from 47 for activity Number 9 to two for Number 23. Even though the percentage for, "Leaves of absence for professional study," is the highest at 50.0 per cent, the participation of only two is so small that the results have little meaning. Tied for last place in Table 9 are, "Attendance at district OEA meetings," and "Year long institutes," neither of which were reported as the source of an idea which promted an innovative practice. For, "Attendance at district OEA meetings," this figure is significant since 249 respondents reported participation in the activity.

This part of the questionnaire was also open at the end for respondents to add activities or experiences which were not included in the checklist. As is shown in the table, 40 respondents listed such activities. Nine respondents listed exchange of ideas with other teachers; four, the needs and interests of students; four, working on the mathematics curriculum; three, the availability of equipment and materials; three, just plain experience; two, trial and error; two, curriculum revision with supervisors during the summer vacation; two, developing ideas initiated by students; and eleven, miscellaneous activities, one each.

Respondents were requested to identify regional or

national professional meetings which they gave as the primary source of the idea which led to the institution of innovative practices. Of five respondents who reported a regional professional meeting, two identified a meeting of the Classroom Teachers Association and one each identified the Vocational Home Economics Association, and NEA conference, and a regional meeting of primary grade teachers. Of four respondents reporting a national professional meeting, two identified the National Council of Teachers of English, and one each the National Council of Teachers of Mathematics, and the American Home Economics Association.

Table 10 shows the rank of the in-service activities according to the number and percentage of participants who reported each as the primary source of ideas prompting innovation (Table 9), and the rank according to the number and percentage of respondents who reported participation in each activity (Table 8).

It is shown in this table that, "Summer institutes," ranked first as a source of ideas prompting innovation but ranked twenty-third in participation by respondents. "Formal on campus course work," ranked second as a source of ideas leading to the introduction of innovative practices and tenth in participation by respondents. "Suggestions from supervisors or administrators," the activity ranked third as a source of ideas prompting innovative practices, ranked eighth in participation. The activity ranked fourth as a source of

TABLE 10.--The rank of in-service activities according to the percentage of participants reporting each activity as the primary source of ideas prompting innovative practices and the rank of these activities according to the number and percentage of respondents participating in each activity

| Rank According to Source of Ideas Table 9 | Activity | Rank According To Participation Table 8 |
|---|---|---|
| 1. | Summer institutes | 23 |
| 2. | Formal on campus course work | 10 |
| 3. | Suggestions from supervisors or administrators | 8 |
| 4. | Attendance at workshops on college campuses | 16 |
| 5. | Extension course work | 20 |
| 6. | Attendance at local school workshops | 7 |
| 7. | Attendance at national professional meetings | 24 |
| 8. | Attendance at special subject matter conferences | 12 |
| 9. | Reading from professional magazines | 1 |
| 10. | Discussions with special consultant | 15 |
| 11. | Local in-service television programs | 19 |
| 12. | Attendance at regional professional meetings | 22 |
| 13. | Demonstration teaching by others | 14 |

Continued on next page

TABLE 10.--continued

| Rank According to Source of Ideas Table 9 | Activity | Rank According To Participation Table 8 |
|---|---|---|
| 14. | Visiting classrooms in other school systems | 21 |
| 15. | Reading from professional books | 6 |
| 16. | Attendance at workshops in other schools | 18 |
| 17. | Attendance at faculty meetings | 5 |
| 18. | Attendance at state OEA meetings | 3 |
| 19. | Attendance at local professional meetings | 2 |
| 20. | Travel | 13 |
| 21. | Visiting other teachers classrooms in your own school system | 17 |
| 22. | Interaction with student teacher | 11 |
| 23. | Viewing national television | 9 |
| 24. | Leaves of absence | 26 |
| 25. | Attendance at district OEA meetings | 3 |
| 26. | Year long institutes | 25 |

ideas leading to innovation, "Attendance at workshops on college campuses," ranked sixteenth in respondent participation. "Extension course work," ranked fifth as a source of ideas prompting innovation and twentieth in participation by respondents. "Attendance at local school workshops," the activity ranked sixth as a source of ideas leading to the introduction of innovative practices, was ranked seventh in terms of respondent participation.

It is further shown in Table 10 that "Reading from professional magazines," ranked first in participation by respondents but ranked ninth as a source of ideas prompting innovative practices by participants. "Attendance at local professional meetings," the activity ranked second in participation by respondents ranked nineteenth as a source of ideas prompting innovation. "Attendance at state OEA meetings," which ranked third in terms of participation by respondents, ranked eighteenth as a source of ideas leading to the introduction of innovative practices. "Attendance at district OEA meetings," the other activity ranking third in participation by respondents, ranked twenty-fifth or last place in the rankings as a source of ideas prompting innovation. "Attendance at faculty meetings," the activity ranked fifth in participation by respondents, ranked seventeenth as a source of ideas leading to the introduction of innovative practices. The activity ranked sixth in participation by respondents, "Reading from professional books," ranked fifteenth as a

source of ideas prompting innovation.

This chapter has reported the in-service education activities in which respondents reported participation during the 1967-68 and 1968-69 school years and identified those activities which were the primary source of the ideas which prompted the innovative practices identified in Chapter III. The next chapter will present a summary, findings, conclusions and recommendations.

# CHAPTER V

## SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

### Summary

The purpose of this study was four fold: (1) To determine which categories of teachers were involved in innovation when the teachers were categorized according to size of school, grade level taught, years of experience, sex, and levels of preparation; (2) To identify innovative practices introduced by the respondents; (3) To determine in-service activities in which teachers had participated; and (4) To identify in-service activities which have been the primary sources of ideas prompting teachers to introduce innovative teaching-learning practices into their classrooms.

A questionnaire was distributed to a sample of the classroom teachers with more than five years of experience who were employed in Oklahoma Public School Systems offering instruction in grades one through twelve or kindergarten through twelve and containing a secondary school accredited by the North Central Association of Colleges and Secondary Schools. The sample was obtained in January of 1968 and the first mailing was completed in March of that year. A complete random sample was obtained by assigning each teacher in the

population a number and then drawing the numbers from a hopper. After the sample was completed, a check was made to determine that a representative sample of the state had been obtained. After the initial mailing, a subsequent plea for responses, a follow-up mailing, a response of 56.0 per cent was secured. Tables were constructed, using data from Part I of the questionnaire, showing the distribution of respondents according to size of schools and the personal characteristics of respondents. These characteristics included sex, grade level taught, years of experience, and educational preparation. Of the 391 respondents, 58 (14.8 per cent) were from schools with less than 50 teachers, 84 (21.5 per cent) were from schools with from 50 to 149 teachers, and 249 (63.7 per cent) were from schools with 150 or more teachers; 190 (48.6 per cent) were elementary teachers and 201 (51.4 per cent) were secondary teachers; 98 (25.1 per cent) were male and 293 (74.9 per cent) were female; 97 (24.8 per cent) were teachers with from 5 to 10 years of experience, 77 (19.7 per cent) were teachers with from 11 to 15 years of experience, and 217 (55.5 per cent) were teachers with more than 15 years of experience; 174 (44.5 per cent) were teachers with bachelor's degrees and 217 (55.5 per cent) were teachers with master's degrees.

A detailed review of the literature included a brief description of selected innovative programs and practices and selected in-service activities. The findings of this

review served as background material and as the basis for the development of the questionnaire used to secure responses for the study.

In Part II of the questionnaire, respondents were requested to indicate whether or not they had introduced innovative practices in their classrooms. Those respondents answering in the affirmative were categorized according to the personal data supplied. Tables were constructed showing the number and percentage of respondents falling into each category. The Z test was used in testing the null hypothesis that there was no significant difference in the proportions of the various related categories of respondents reporting innovative practices.

Those respondents answering affirmatively were asked to briefly identify or describe the innovative practices which they had instituted. Tables were then constructed showing the number and percentage of practices categorized according to areas of subject matter and methodology respectively. There was some overlapping between these two categories since a methods practice may also be classified as being in a subject matter area.

Part II of the questionnaire also contained a checklist for respondents to indicate in-service activities in which they had participated. A table was constructed showing the number and percentage of the 377 respondents who reported participation in each activity with the activities arranged

in descending order according to participation. The percentages were reported in two ways. One column showed the percentages calculated with the number reporting participation as a percentage of the total respondents. The other column showed the percentages calculated by dividing the number reporting participation in an activity by the total number of activities reported by all 377 respondents (3452).

The same checklist was used for respondents to identify the activity which was the one primary source of the idea leading to the introduction of the innovative practices described earlier. A table was constructed showing the number and percentage of respondents reporting each activity as the primary source of the idea prompting the innovative practice. The activities were arranged in descending order according to the relationship which the number reporting the activity as the source of the idea prompting the introduction of one or more innovative practices bore to the number reporting participation in the activity. This relationship was shown as a per cent.

A final table was constructed showing the rank of in-service activities according to the percentage of respondents reporting each activity as the primary source of ideas prompting innovative practices and the rank of the activities according to the number and percentage of respondents reporting participation in each activity.

## Findings

1. At the .05 level of confidence it was determined that teachers in schools with from 50 to 149 teachers were significantly more involved in innovation than those in either schools with less than 50 teachers or those with 150 or more teachers. There was no significant difference in the involvement in innovation of teachers in the latter two groups.

2. At the .01 level of confidence it was determined that elementary teachers were significantly more involved in innovation than secondary teachers.

3. At the .01 level of confidence it was shown that female teachers were significantly more involved in innovation than male teachers.

4. At the .05 level of confidence it was shown that teachers with master's degrees were significantly more involved in innovation than those with bachelor's degrees.

5. There was no significant difference in teacher involvement in innovation according to years of experience.

6. The teacher who was most likely to be involved in innovation was a female, elementary teacher with a master's degree employed in a school with from 50 to 149 teachers.

7. Mathematics, reading, language arts, and social studies led all curriculum areas in the number of innovative practices reported by respondents.

8. By far the greatest number of innovative practices reported in methodology involved the use of educational media.

9. The in-service activity with the greatest participation was, "Reading from professional magazines." The total range in participation was from 296 in this activity to two in, "Leaves of absence for professional study." The range in participation expressed in percentage was from 78.5 to .01.

10. The activity which prompted the greatest percentage of participants to introduce innovative practices into their classrooms was, "Summer institutes." Twenty-one or 44.7 per cent of the 47 respondents who participated in the activity identified it as the source of the idea prompting innovative practices. The next four activities in the order of their rank were; (1) Formal on campus course work, (2) Suggestions from supervisors or administrators, (3) Attendance at workshops on college campuses, and (4) Extension course work. Of the first five ranked activities it was noted that four were planned or directed by college or university personnel.

11. It was revealed that, "Attendance at district OEA meetings," which ranked third in participation ranked in last place as a source of ideas for innovation with not a single participant reporting it as such.

12. Other activities which ranked high in participation but low as a source of ideas prompting innovative practices were: (1) "Attendance at faculty meetings," in which 64.5 per cent of the respondents reported participation but only 3.7 per cent reported them as a source of ideas leading

to innovation; (2) "Attendance at state OEA meetings," in which participation was reported by 66.0 per cent of the respondents with only 3.2 per cent gaining ideas which led to the introduction of innovative practices; and (3) "Attendance at local professional meetings," in which 67.9 per cent of the respondents participated but only 2.7 per cent reported the activity as being the source of ideas prompting innovative practices.

## Conclusions and Recommendations

1. Since the study showed that elementary teachers were more involved in innovation, each local school district should explore its own situation to see if this condition exists. If it does, a system-wide plan should be developed encouraging teachers at all levels to introduce innovative practices.

2. The study showed that teachers with master's degrees were more involved in innovation than those with bachelor's degrees. Therefore, it is recommended that teachers be encouraged to seriously consider programs leading to a master's degree.

3. As shown in the study, innovative practices involving the use of educational media far outnumbered those in other methods areas. Other innovative practices in methodology described in the study included; grouping for instruction, individualized instruction, team teaching, independent

study, ungraded primary, and teacher aides. These practices should be carefully examined for possible use on a broader scale.

4. Since the study showed that the following five activities ranked highest as sources of ideas prompting participants to introduce innovative practices, they should be emphasized in planning in-service education programs; (1) Summer institutes, (2) Formal on campus course work, (3) Suggestions from supervisors or administrators, (4) Attendance at workshops on college campuses, and (5) Extension course work.

School systems should encourage teachers to participate in available institutes and should support the efforts of colleges and universities in providing such institutes.

6. Three of the activities ranked in the top five as sources of ideas prompting participants to introduce innovative practices would require payment of fees by those participating; therefore, some form of cost sharing should be considered by school systems.

7. Although the following activities had a relatively high percentage of participation by respondents, a low percentage of the participants reported them as the primary source of the idea prompting innovative practices: (1) Reading from professional magazines, (2) Attendance at local professional meetings, (3) Attendance at state OEA meetings, (4) Attendance at district OEA meetings, (5) Attendance at faculty

meetings, (6) Reading from professional books, and (7) Attendance at local school workshops. Because of this high participation and low production of ideas prompting innovation, those responsible for planning these activities should attempt to make them more effective in stimulating improvement in the instructional program.

8. The great impetus for innovative practices started with the advent of federal financial assistance to education. Wise educators should seek out and institute promising innovative programs and practices, however, they should not rush headlong into innovation just to be fashionable or to secure federal funds. All innovative practices should be planned and evaluated in light of local school needs.

9. School districts of a particular geographical area, perhaps a county or multi-county region, should unite to pool financial and human resources for a better planned, better organized, and broader approach to in-service education.

10. One of the chief barriers to educational innovation appears to be timidity or fear. Educators may overcome the fear of change by considering innovations that have been successful in other schools and that with slight modifications could be introduced into their own school systems; at the same time, they should not be reluctant to try something new.

11. Another barrier to educational innovation seems to be the lack of financial ability on the part of school systems. The lack of money should not preclude the introduction

of innovative practices, as there are many practices that with planning and effort on the part of teachers can be introduced into any school system at relatively small cost.

12. Since classroom teachers are the ones who will cause the success or failure of innovation, administrators should be sure to involve them in all phases of the innovative process.

13. For change and improvement to take place in the instructional program, change must first take place in teachers. To foster the needed change in teachers, well planned, comprehensive programs of in-service education are necessary. The responsibility for these in-service programs is collective in nature involving administrators, school boards, and teachers. There is a need for a careful study of the in-service program in each school system with the aim of overall improvement through the elimination or improvement of poor practices and the addition of needed activities.

14. Certain trends and innovations in in-service education were discerned from a study of the literature which should be noted: (1) Greater teacher involvement in planning, (2) The use of non-college credit courses conducted by school personnel, (3) A wider variety of activities, (4) More released time for in-service participation, (5) Compensation for time spent in in-service participation outside of school hours, (6) Pre-school year and post-school year sessions held for the specific purpose of in-service education, (7) Organized

evaluation procedures for in-service education, (8) The employment of extra teachers to free regular teachers for in-service participation, and (9) The use of non-teaching personnel for supervisory duties thus freeing teachers for in-service education.

15. The review of the literature revealed the following as in-service practices which should be avoided: (1) Indiscriminate in-service programs for all teachers, (2) Activities planned at times that will consume energy that teachers should spend on their teaching, (3) Overloading teachers so that they have very little or no time or energy to devote to in-service education, and (4) The indiscriminate accumulation of in-service credits for advancement on the salary scale.

## Recommendations For Further Study

1. A critical appraisal should be made of in-service education in Oklahoma Schools. This would involve the determination of objectives and the establishing of standards for in-service programs.

2. A study should be conducted to determine if there is a relationship between the degree of innovativeness and the per capita expenditure of school districts.

# BIBLIOGRAPHY

## Books


Bash, James H. and Morris, Thomas J. Planning and Implementing In-Service Education Programs In Desegregated Schools. Bloomington, Ind.: Phi Delta Kappa, 1967-68.

Best, John W. Research in Action. Englewood, Cliffs, N. J.: Prentice Hall, Inc., 1959.

Conant, James B. The Education of American Teachers. New York: McGraw-Hill Book Company, Inc., 1963.

Fallon, Berlie J., ed. Educational Innovation in the United States. Bloomington, Ind.: Phi Delta Kappa, Inc., 1966.

Heinrich, June Sark. Innovation in Education: Some Examples. Unit Seven, Science Research Associates Teacher Education Extension Service. Chicago: Science Research Associates, 1967.

Moffitt, John Clifton. In-Service Education for Teachers. New York: The Center For Applied Research in Education, Inc., 1963.

Steig, Lester R. and Frederick, E. Kemp. School Personnel and In-Service Training Practices. West Nyack, New York: Parker Publishing Co., Inc., 1969.

National Society for the Study of Education, fifty-sixth Yearbook. In-Service Education For Teachers, Supervisors, and Administrators. Chicago: University of Chicago Press, 1957.

Oklahoma State Department of Education. Successful Ventures in Oklahoma 1966-67, Volume III. Selected and Arranged by the Oklahoma Curriculum Improvement Commission. Oklahoma City: Oklahoma State Department of Education, 1967.

Oklahoma State Department of Education. Catalog of Educational Innovations in the Oklahoma Public Schools. Prepared by the Southwestern Cooperative Educational Laboratory, Inc., and the Oklahoma Curriculum Improvement Commission. Oklahoma City: Oklahoma State Department of Education, 1967.

Oklahoma State Department of Education. Successful Ventures in Contemporary Education in Oklahoma 1967-68, Volume IV. Selected and arranged by the Oklahoma Curriculum Improvement Commission. Oklahoma City: Oklahoma State Department of Education, 1968.

Rubin, Jouis J. (ed). Educational Change: The Reality and the Promise. New York: Citation Press, 1968.

## Articles

"A New Look at Teacher Supply and Demand." NEA Research Bulletin, XLIV (December, 1966), 117-123.

"A Review of the New Language of Education," The Oklahoma Teacher, L (April, 1969), 35-37.

Anderson, G. Ernest Jr. "Estimated Time for Accepting Educational Ideas: 30 Years." Nation's Schools, LXXVIII (December, 1966), 50.

Alam, Dale V. "Opporunities for Growth." Educational Leadership, XXV (November, 1967), 153.

Balner, John M. "Continuing Education--The Challenge to Principals." National Elementary School Principal's Bulletin, XLIV (September, 1964), 10-14.

Baughman, M. Dale. "Continuing Education for Junior High School Personnel." High School Journal, L (December, 1966), 153-58.

Brown, Harry L. Jr. "Teacher Growth in the Secondary School." High School Journal, XLVIII (January, 1965), 250-56.

Carmichael, Benjamin E. "Some Thoughts on Educational Change." The School Administrator, (August, 1969), 2.

Carswell, Evelyn. "Walker School's Interpretation of Educational Change." Educational Leadership, XXIV (April, 1967), 643-47.

Chessin, Dr. Gerald A. and Walsh, Dr. Edward. "Time-Out for In-Service Education." Virginia Journal of Education, LIX (May, 1966), 31-32.

"Computers Invade Appalachia for 'New Math' Training," Nation's Schools, LXXXIV (October, 1969), 120.

Coulter, Kenneth C. "They Budget to Give Teachers Free Time." Nation's Schools, LXXXIV (March, 1969), 66.

Davis, Donald L. and Shaver, John A. "News Ideas In Urban Schools," Nation's Schools, LXXXIII (March, 1969), 67-82.

Divoky, Diane. "To Elaborate Critics Say, But IPI Keeps on Growing," Nation's Schools, LXXXIV (November, 1969), 44-50.

"Duncan PE Goes Coed." Oklahoma State Superintendent's Newsletter, X (October, 1969).

Edinger, Lois V. "Teaching In An Age of Discovery." Wisconsin Journal of Education, XCVIII (March, 1966), 16-18.

Elementary Education Committee of the Oklahoma Curriculum Improvement Commission "An In-Service Education Concept." The Oklahoma Teacher, XLIX (May, 1967), 21-22.

Emmerling, Frank C. and Chavis, Kanawha Z. "The Teacher Aide." Educational Leadership, XXIV (November, 1966), 175-83.

Fleming, J. Carl. "Pupil Tutors and Tutees Learn Together." Education Age, LVIII (October, 1969), 22-24.

Frazier, Alexander. "News Notes." Educational Leadership, XXIV (December, 1966), 289-92.

Frazier, Alex nder. "News Notes." Educational Leadership, XXV (May, 1968), 781-93.

Freiser. L. H. "Let's Close the Factory." Educational Leadership, XXIV (May, 1967), 741-45.

Grieder, Calvin. "Attention Innovators: Don't Ignore the Promising Areas." Nation's Schools, LXXIX (March, 1967), 8.

Griffin, Gary A. "The Teacher Evaluates Innovations." NEA Journal, LV(December, 1967), 26-28.

Guba, Egan G. "Diffusion of Innovations." Educational Leadership, XXV (January, 1968), 292-95.

Harris, Ben M. "In-Service Growth--The Essential Requirement." Educational Leadership, XXIV (December, 1966), 257-60.

Haywood, Robert A. "Maximum Results from Mini-Courses." Today's Education, LVIII (September, 1969), 55-57.

Heller, M. P. "The Administrator and Innovation." The American School Board Journal, CLV (March, 1968), 19.

Heywood, Stanley J. "Toward A Sound Theory of Innovation." Education Digest, XXXI (February, 1966), 9-12.

Hodges, J. B. "Continuing Education: How and Why." Educational Leadership, XVII (March, 1960), 330-31.

"Innovations and Rural Schools," Hot Line, II (October, 1969).

"Innovations Explosion." Instructor, LXXVI (October, 1966), 184.

"In-Service Training." School Management, XII (February, 1968), 75-96.

Jensen, George M. "Year-Round School: Can Boards Sidestep It Much Longer." The American School Board Journal, CLVII (July, 1969), 9-10.

Keeley, Jean A. "Criteria For Innovations." Educational Leadership, XXV (January, 1968), 304-307.

"Kids Should Know the Law." Phi Delta Kappan, LI (October, 1969), 84.

Krater, Joan M. "Teachers Decide How They Can Improve." Nation's Schools, LXXIX (February, 1967), 68.

Lewis, Phillip. "Audio-Visual Management," Nation's Schools, LXXXIV (November, 1969), 66-73.

Leibman, Mary. "How Nine Year-Round Plans Compare." The American School Board Journal, CLVII (July, 1969), 10-11.

Mackenzie, Gordon N. "The Process of Innovation." NEA Journal, LVI (May, 1967), 27-31.

Maves, Harold J. "Insight Through In-Service," Today's Education, LVIII (April, 1969), 42.

McFarland, William J. and Williams, Lois. "Individualizing In-Service Education." The National Elementary Principal, XLIV (September, 1964), 32-36.

Merz, William R. "Education and the Process of Change." Educational Leadership, XXIV (March, 1967), 561-67.

Moore, Arnold J. "An Approach to Flexibility." Educational Leadership, XXIV (May, 1967), 691-95.

Moore, Samuel A. II and Heard, James E. "Resistance to Change: A Positive View." Phi Delta Kappan, L (October, 1968), 117-18.

"Multiusage Cassettes Take Bows at NAVA Exhibits." Nation's Schools, LXXXIV (October, 1969), 86.

"Nassau County's Safety Town." Phi Delta Kappan, (November, 1969), 177.

"Need for Space Will Not Wait." The Enid Morning News, October 31, 1969, 20.

Nelson, Lester W. "Breaking Barriers to Improve Staff Utilization." National Association of Secondary School Principals Bulletin, XLII (April, 1958), 329-33.

"Outdoor School Brings Urban Youth Back to Nature." Nation's Schools, LXXXIII (February, 1969), 73.

Pennock, Laurel M. "If I Had It to Do Over Again." Education Age, VI (March-April, 1969), 5-7.

Prentice, Justus A. and others. "The Other Side of the Coin." Education Age, V (November-December, 1968), 8-39.

"Professional Growth of Teachers In Service." NEA Research Bulletin, XLV (March, 1967), 25-27.

Purdy, Ralph D. "The Public and Innovation." Educational Leadership, XXV (January, 1968), 296-99.

"Push-Button Auditorium Has Revolving Seats." Nation's Schools, LXXXIV (July, 1969), 54.

Rhein, Robert J. "Burlington's A-V In-Service Training Available to All." Nation's Schools, LXXXIV (October, 1969), 84.

Reno, Raymond H. In-Service Teacher Training: A Critique, Not An Indictment." Education Age, IV (November-December, 1968), 4-5.

"State Buses Auto Shop to Students." Nation's Schools, LXXXII (February, 1969), 127.

"State Innovation Funds." Phi Delta Kappan, LI (October, 1969), 112.

Sterling, John, "Oh No! Not Again." National Elementary School Principal's Bulletin, XLI (February, 1962), 17-20.

Tannenbaum, Harold E. and Lacey, Archie. "For Elementary Teachers: Mass In-Service Education?" Educational Leadership, XXV (October, 1967), 51-53.

Tanzman, Jack. "How Videotape Improves Teaching." School Management, XIII (August, 1969), 56-58.

"Teachers Needs for In-Service Training." NEA Research Bulletin, XLVI (October, 1968), 80-81.

"Teaching Typing Via Video Tape." /I/D/E/A/ Reporter, (Spring Quarter, 1968), 4.

"The Saturated Environment." School Management, XIII (October, 1969), 56-63.

Townsley, Beverly J. "Year-Round School." Education Age, (September, 1969), 6.

"Twelve-Month School In New York." Phi Delta Kappan, L (April, 1969), 498.

Wilson, Laval S. "In-Service Training: Lifeline for Integration." Nation's Schools, LXXXIV (October, 1969), 70-76.

## Published Reports

American Association of School Administrators. In-Service Education for School Administration. A Report Prepared by the AASA Commission on In-Service Education for School Administration. Washington, D. C." American Association of School Administrators, 1963.

Committee For Economic Development. Innovation in Education: New Directions for the American School. A Statement by the Research and Policy Committee. New York: Committee for Economic Development, 1968.

"Continuous Progress Materials Project," /I/D/E/A/ Annual Report, Dayton Ohio. /I/D/E/A/, 1968.

Hermanowicz, Henry J. "The Pluralistic World of Beginning Teachers," The Real World of the Beginning Teacher. Washington, D. C.: National Education Association, 1964.

National Commission of Teacher Education and Professional Standards. The Development of the Career Teacher: Professional Responsibility for Continuing Education. Washington, C. D.: 1963.

National Education Association. In-Service Education of Teachers. A Report Prepared by the Research Division. Washington, D. C.: National Education Association, 1960.

National Education Association. Auxiliary School Personnel. A Report by the National Commission on Teacher Education and Professional Standards. Washington, D. C.: National Education Association, 1967.

Noar, Gertrude. Teacher Aides at Work. A Statement by the National Commission on Teacher Education and Professional Standards. Washington, D. C.: National Education Association, 1967.

17 Projects: Federal Funding for Education--1966 A Beginning. Washington, D. C.: Educational Developmental Laboratories, Inc., 1967.

The Gallup Polls On Innovation. Melbourne, Florida: Institute for Development of Educational Activities, 1964.

This We Believe. Joint Statement of the American Association of School Administrators and the National School Boards Association, 1963.

United States Department of Health, Education, and Welfare. Summer Education for Children of Poverty. A Report Prepared by the National Advisory Council on the Education of Disadvantaged Children. Washington, D. C.: U. S. Government Printing Office, 1966.

United States Department of Health, Education, and Welfare/ Office of Education. Stepping Up With Pace. Washington, D. C.: U. S. Government Printing Office, 1967.

# APPENDICES

# APPENDIX I

## Letters to Respondents

Hennessey, Oklahoma
March 23, 1968

Dear Colleague:

The greatest certainty of this age is change. We have witnessed in a few short years the vast changes in every facet of our society. Included in these are changes in education, not only in curriculum, but in teaching methods and equipment. All of these have great implication for in-service education of teachers.

I am attempting in a doctoral study to identify innovative practices which have been instituted in Oklahoma education and to determine the sources of the ideas or the educational experiences which prompted the introduction of the practices. The results of the study will be used to promote better planning of future in-service programs for teachers.

I have discussed this project with the late Dr. Oliver Hodge and he stated that such a study could be very beneficial to education in Oklahoma.

I am asking you to PLEASE take a few minutes out of your already crowded schedule to fill out the enclosed questionnaire. For your convenience a self addressed, stamped envelope is enclosed for return of the questionnaire.

All answers on this questionnaire will be held in strict confidence.

Yours truly,

Irvin Carter

Hennessey, Oklahoma
November 26, 1968

Dear Colleague:

Last spring I mailed questionnaires to a carefully selected sample in an attempt to identify innovative practices and to study in-service activities of Oklahoma teachers. To date I have not received a sufficient number of returns for a valid study in this field.

Perhaps you lost the questionnaire or found yourself pressed for time to the extent that you could not fill it out.

Whatever the reason may have been, I would appreciate it very much if at this time you would please take a few minutes to fill this one out and return it in the enclosed, stamped, addressed envelope. I need these returns very much so that I can complete my study.

Thank you for your time and effort.

Yours truly,

Irvin Carter

# APPENDIX II

Questionnaire

# QUESTIONNAIRE
## Part I
## Descriptive Data

A. Personal Data
Sex___

B. Professional Data

1. Please check your present position
___Elementary Teacher (Grades K-6)
___Secondary Teacher (Grades 7-12)

2. Number of years of experience
___5-10 years
___11-15 years
___Above 15 years

3. Educational Preparation
___Bachelor's Degree
___Master's Degree
___Doctor's Degree

## Part II

1. Have you during the past two years instituted any significant innovations in curriculum or teaching methods, in your classroom, aimed at improving instruction? (For the purpose of this study innovations can best be defined as those practices which are new to education, practices new to a particular school system, or practices new to an individual teacher. In this study any greater or different use of a previously used teaching-learning practice shall be considered as an innovative practice.)

___Yes, ___No.

If your answer is "no," please disregard Section 2 and follow the instructions under Section 3A. This will complete the questionnaire. If your answer is "yes," please complete Section 2, Sections 3A, and 3B.

2. Describe or identify in a phrase or a paragraph the nature of the innovations referred to above under No. 1. (Example: New practice might be described as "Made new and more extensive use of audio-visual materials"; "Experimented with new methods of grouping pupils"; "Developed and tested materials and procedures for individualizing instruction"; or "Introduced the new math.")

Innovative Practice No. 1_____

_____

_____

Innovative Practice No. 2_____

_____

_____

Innovative Practice No. 3_____

_____

_____

3. This item has two parts. It seeks to discover in what professional growth experiences you have participated during the past two years and what were the sources of the ideas or what educational experiences prompted you to introduce each of the innovative practices identified under No. 2 above. Please indicate your responses on the form provided, as indicated below:

   A. In the column provided on the left, please place an "X" by those professional growth activities in which you have participated during the past two years.

   B. In the columns provided on the right, place an "X" opposite what you believe to be <u>the one</u> primary source of the idea or the educational experience which caused you to introduce the practice indicated under No. 2 above. It is recognized that it will be difficult to pick only one but this kind of selection is critical to the study. If the source or experience is not listed, please identify or describe in your own words in the space provided what prompted you to introduce the practices indicated.

| Place "X" in appropriate space to indicate participation | Source, idea, or educational experience which led to the introduction of innovative practices | Place "X" in appropriate space to indicate primary source of idea for each practice. Mark ONLY ONE SOURCE for each practice | | |
|---|---|---|---|---|
| | | Pract. No. 1 | Pract. No. 2 | Pract. No. 3 |
| | 1. Formal on campus course work | | | |
| | 2. Extension course work | | | |
| | 3. Attendance at local school workshops | | | |
| | 4. Attendance to workshops in other schools | | | |
| | 5. Attendance at workshops on college campuses | | | |
| | 6. Reading from professional magazines | | | |
| | 7. Reading from professional books | | | |
| | 8. Suggestions from supervisors or administrators | | | |
| | 9. Demonstration teaching by others | | | |
| | 10. Attendance at local professional meetings | | | |
| | 11. Attendance at district OEA meetings | | | |
| | 12. Attendance at state OEA meetings | | | |
| | 13. Attendance at regional professional meetings Identify meeting | | | |

Continued on next page

| | | | | |
|---|---|---|---|---|
| | 14. Attendance at national professional meeting. Identify meeting | | | |
| | 15. Attendance at special subject matter conference | | | |
| | 16. Attendance at faculty meetings | | | |
| | 17. Visiting classrooms in other school systems | | | |
| | 18. Visiting other teachers' classrooms in your own school system | | | |
| | 19. Travel | | | |
| | 20. Viewing national television programs | | | |
| | 21. Local in-service television programs | | | |
| | 22. Discussions with special consultant | | | |
| | 23. Leaves of absence for professional study | | | |
| | 24. Summer institutes | | | |
| | 25. Year-long institutes | | | |
| | 26. Interaction with student teacher | | | |
| | 27. Other | | | |
| | 28. Other | | | |
| | 29. Other | | | |